THE HISTORY

OF THE

LITERARY AND PHILOSOPHICAL SOCIETY

OF NEWCASTLE-UPON-TYNE

(1793—1896)

ROBERT SPENCE WATSON

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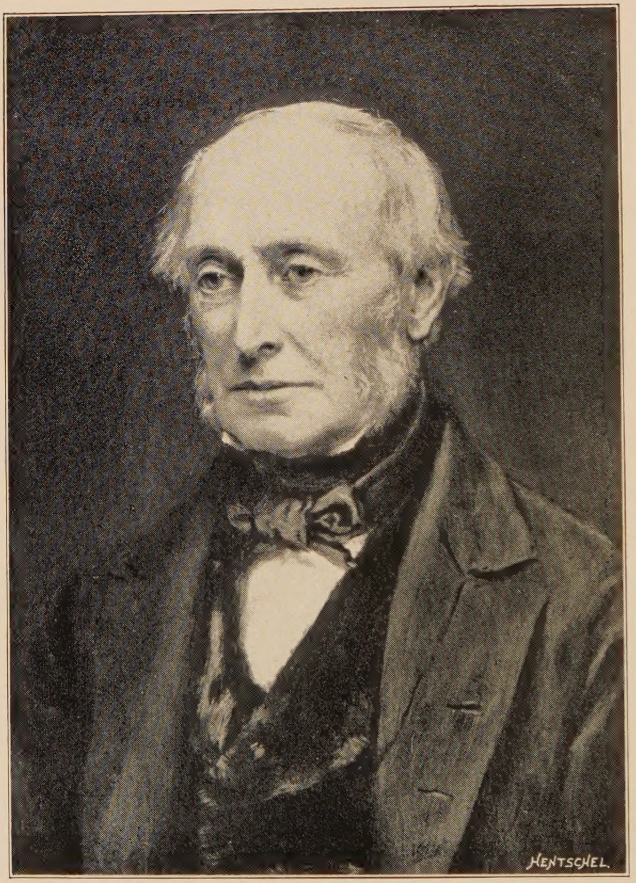

LORD ARMSTRONG, C.B., F.R.S.

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THE HISTORY

OF

THE LITERARY AND PHILOSOPHICAL SOCIETY

OF NEWCASTLE-UPON-TYNE

(1793—1896)

BY ROBERT SPENCE WATSON

WITH NUMEROUS ILLUSTRATIONS

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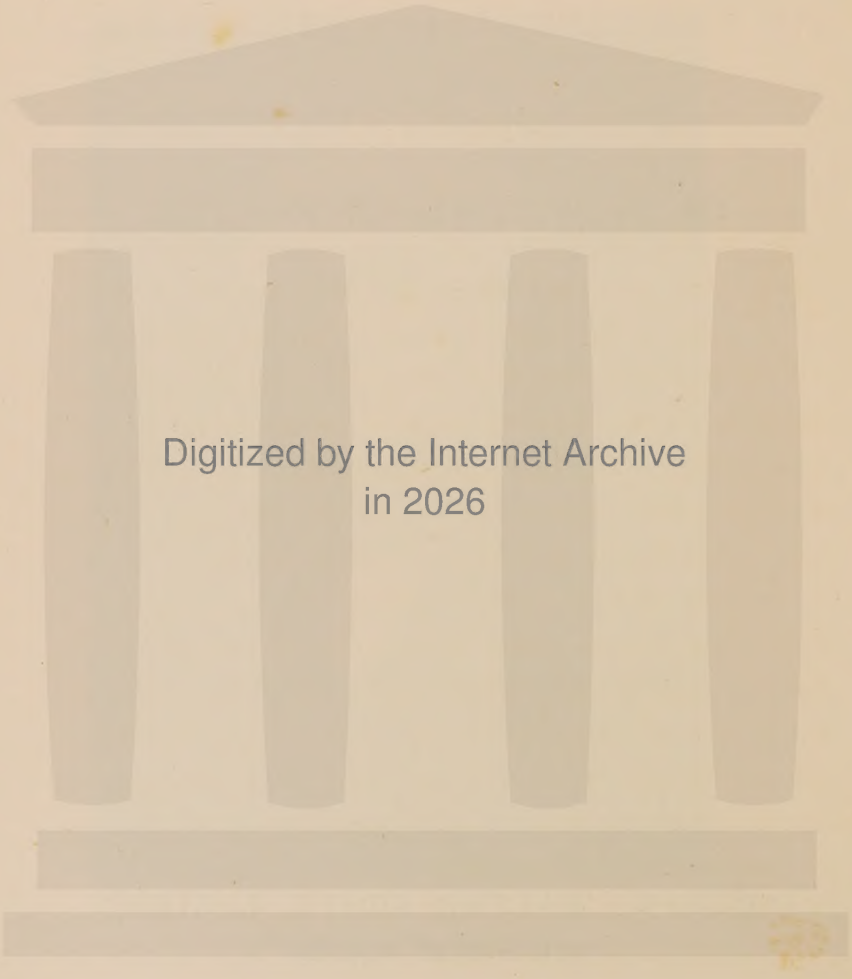
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PREFACE.

A BOOK which must perforce be written in the irregular and infrequent leisure of a busy professional life, is sure to be fruitful in faults. That the curious reader will find more than enough in this book I doubt not, but I pray him to set down some of the frequent repetitions, for example, to the abiding sense of the writer that most persons will but dip into such a work, perusing carefully, at the most, such chapters only as may directly appeal to their special interest.

For other faults the reader may find some excuse in the love which I bear for a Society of which I have been a member for forty-three years, during thirty-three of which I have had the honour and privilege of serving it. That its story ought to be told has long been present to my mind, and the attachment of the narrator may perchance be permitted somewhat to condone the imperfections of his narration.

I have to acknowledge, with much gratitude, the ready response which the many friends to whom I have applied for

information have made to my requests. Especially must I thank the bodies of management of public and private institutions, and the ladies and gentlemen, who have enabled me to enrich my little volume with illustrations, many of which are portraits of those who have made our Society famous. I have avoided, as much as may be, speaking of the eminent men who are still with us, and who hand on to the future the fine traditions of the past. In only one case have I inserted the likeness of a living person, but that case is so exceptional that every one will agree in the propriety of my action. Lord Armstrong's services to the Society have been unvarying and invaluable over a period of half-a-century.

ROBERT SPENCE WATSON.

BENSHAM GROVE,
December 10th, 1896.

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By W. B. Richmond, R.A. ; in the possession of Lord Armstrong.

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From a drawing in the possession of the Author. On the back of this drawing is written: "This view of part of the town of Newcastle, and representing the Tyne frozen over, is unique. The artist's name is not given, but the date, 1784, marks the time of its execution. In that year there was a severe storm of frost and snow, when the Tyne was three times frozen over in one month, a circumstance not before remembered by the oldest person living. The Castle appears in its original state. Tyne Bridge (with its oil lamps) had been completed some three years. The venerable Chapel of St. Thomas, with the old Exchange, and the famous crow's nest on the pinnacle of its spire, is introduced for the first time in this drawing, sketched from nature. A pair of crows first began to build their nest upon the top of the vane in March 1783. During the severe winter of the following year the crows had a very comfortable home; here they resided for some years, hatching and rearing their young, but not without a very determined resistance from some other crows, who appeared envious of their curious and novel structure. All on a sudden the birds left, without any apparent cause, and never returned to it again. 'Coming events' had 'cast their shadows before.' Not long after their departure the Exchange took fire. Had they remained, not only their skilfully-built nest, but its feathered inmates would have been destroyed."—R. ROBINSON, Bewick's Head—November 1874."

By using a powerful magnifier I find the artist's name and the date—"R. O. Clark—March 1784."

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It was intended that a portrait of the Rev. James Snape, D.D., should have appeared among the illustrations. A lithograph was kindly furnished by the Rev. R. W. Snape for this purpose. It has been unfortunately mislaid, to the Author's great regret.

The statement on page 110, that the Society has no portrait of Thomas Bewick, is incorrect.

CHAPTER I.

NEWCASTLE A CENTURY AGO.

A CENTURY ago Newcastle-upon-Tyne was fully recognised as a great industrial centre. Thanks to the proximity of the Northern coal-field, which had from time immemorial been the most important in Great Britain, it had many centuries of more than local fame to look back upon. Since the twenty-eighth year of Henry III.'s reign (1244 A.D.) it had been governed by a Mayor chosen by the burgesses; and Henry IV., in the last year of the fourteenth century, conferred upon it all the privileges of a distinct county with its own Lord Lieutenant, Sheriff, and Magistrates: it should "be a county of itself with the title of the County of the Town of Newcastle-upon-Tyne." Although it has possessed this dignity ever since, for seven hundred years, persons may even yet be found who speak of it as in the county of Northumberland!

Placed upon the northern side of a steep, deep, and richly-wooded glen; connected with its opposite neighbour, little

Gateshead (inaptly, perhaps, described as "a dirty lane leading to Newcastle"), by a handsome stone bridge crossing the broad, clear, and beautiful river Tyne, the abode of lordly salmon and delicious trout; rejoicing in a bright and dry atmosphere; swept by bracing but not unkindly breezes; and with a variable yet, on the whole, genial climate; it was truly a pleasant habitation. In 1759, John Wesley had written of it: "Certainly, if I did not believe there was another world, I would spend all my summers here, as I know no place in Great Britain comparable to it for pleasantness." At that time there were probably some thirty thousand people in the canny old town and Gateshead, who had, as they best might, to reconcile the spending of all their summers there with such belief in another world as was vouchsafed to them. Nearer to the close of last century, another writer called it "an ancient, large, disagreeable, and dirty town." Even at the present day those who are so fortunate as to inhabit it would dispute the accuracy of such a description. But no one could deny the correctness of the "Town Improvement Act" of 1786, which declared in its preamble that "the town of Newcastle-upon-Tyne, in the county of Newcastle-upon-Tyne, is very large and populous."

It was a walled town, and had been walled since the earliest years of its existence. We know, indeed, nothing of it when it was the Pons Ælii of the Romans or the monastic Monkchester, but most of it may well have been contained within the walls which surrounded the castle garth, the yard of the new castle which Robert Courthose began to build in the year 1080. Finished by William Rufus, that new castle soon looked down upon a spreading town, the growth of which was favoured and fostered by succeeding monarchs. Its position near the "gate of Scotland" gave it a special importance, for the restlessness of their Scotch neighbours demanded constant care on the part

of the dwellers in the chief Border town of England. In the reign of Edward I. the Newcastle people began to construct new walls, eight feet thick and twelve feet high, which had strong turrets at every angle, and important towers, of pleasing variety of design and dimensions, at each of the different entrances to the town. At least one of these, the Newgate, was itself a great castle, having its moat and drawbridge, as well as the heavy gate and portcullis which were common to all the towers alike. Writing in the middle of the sixteenth century, Leland says, "The strength and magnificense of the waulling of this towne far passith al the waulles of the cities of England, and most of the townes of Europe." Excepting towards the river, these walls and towers were still perfect a century ago. The Quay side portion had been removed in 1762. The last to be completed, in Edward III.'s reign, it was the first to be taken down; the Privy Council ordering its destruction upon the petition of the Corporation, which stated that it was no longer of any use for defence, but a very great obstruction to carriages and hindrance to the despatch of business. Some of the town gates began to give trouble upon market-days and during festival seasons, and our Scotch neighbours acquired the art of getting the better of us by gentler means, so that only a few relics of the ancient defences of the town now remain.

There was but little building outside the walls a century ago. The town might fairly be described as having been enclosed by them; and within the enclosure there was room for the crofts, fields, and gardens, which, with their abundant trees, gave the quaint old Border stronghold its unique charm. It was indeed, a few years earlier, "a place of broad rivers and streams." Where Dean Street now stands, the Lorke Burn flowed down to join the Tyne, its steep and dangerous banks being crossed by stone bridges, the Upper Dean Bridge and the Low Bridge, the

latter not being removed until the year 1788 to allow of the opening of the new street. Grey states in his *Chorographia* that the Picts Wall came over the "neather Deane Bridge, and that boats came under it from the river, and so along into Pandon, as appears by the rings that in many places are to be seen at this day" (1649). These boats brought wares and commodities for the merchants whose shops and warehouses were in the Flesh Market. The site of the arch still bears the name of the "Low Bridge," and Bourne thinks that the adjoining Painter Heugh preserves the memory of the time when boats used to be moored to the heugh, haugh, or steep side of the stream by ropes fastened to their bows, and yet known as painters. But so far as I have been able to ascertain, there is no evidence that the term "painter" was applied to boat ropes until a comparatively recent date, whereas the name "Paynter Hugh" is said to have occurred in a deed once preserved in the vestry of All Saints' Church, and of the year 1373. On the other hand, a place at the north of this lane still known as Painter Heugh was called "Pencher Place," and the Paynter of 1373 may well have been the Pencher of a yet earlier date.*

A century ago, the Sandhill—once a naked hill of sand "where were wont to assemble the inhabitants for their recreation"—was the great market-place of the town; and round it, and along the Close, many of the principal inhabitants of the town, and some of the county nobility and gentry, had handsome dwelling-houses. There, too, stood the stately Mansion House, built in 1691 at a cost of £6000, with its terrace overlooking the

* It is, perhaps, dangerous to remind the reader that we have a Penshaw, or Pencher, in the County of Durham, which, it is claimed, derives its name from the British word Pen, a hill, and the old English word Scua, a shade, and thus a shaded place, a wooded place; or, possibly, the British word Sceach, a bramble.

VIEW OF NEWCASTLE FROM GATESHEAD DURING SEVERE FROST IN MARCH, 1784.

river, and the broad flight of steps leading down to the spot where the somewhat gaudy Corporation barge lay moored, which proved so dangerous an attraction to "my Lord 'Size." Here did successive mayors exercise great, and at times inconvenient, civic hospitality, towards which the town contributed £2000 a year and an extensive cellar of choice wines. The Guildhall, in which the courts were held, stood between the Sandhill and the river, almost exactly opposite to the picturesque house whence "on the night of the 18th November, 1772, Miss Bessie Surtees descended by a ladder into the arms of her lover, from a window," and the future Lord Eldon, then plain John Scott, bore her safely "o'er the Borders and awa'." That early hours were the fashion in those days is shown by one of the old rules of the Burgess and Non-Burgess Courts, which provided that solicitors attending them were not to appear in their dressing-gowns and slippers. The town was for the first time lighted by oil lamps and a regular nightly watch established in 1763.

I have said that at times the hospitality of the Mansion House was so great as to be inconvenient. I may illustrate this by the tale which used to be told about a worthy alderman who, having built a house on the top of the steep bank north of the Close, and near Hanover Square, with a garden running down the bank, found himself seriously inconvenienced by the volumes of black smoke which constantly issued from the Mansion House chimneys. Remonstrances having proved of no avail, he at length sued the Mayor and Corporation for damages. The great Henry Brougham, or "Hairy Brum," as the Newcastle folk fondly called him, was then the leader of the Northern Circuit, and he was duly retained for the defendant authorities. But alas! when injured Alderman S. was in the witness-box, and was arousing the sympathies of his fellow-townsmen in the jury-box with a detailed recital of how his health and that of

his wife and family had been rudely shattered by the perpetual smoke, the learned leader seemed to be wrapped in profound and peaceful sleep. His wig was over his eyes, his hands were where his pockets would have embraced them nowadays, his head nodded gently as though in unconscious acquiescence. At length, the examination in chief being finished, it was time for the alderman's cross-examination to begin. His junior must at all hazards arouse the chief, and gently whispered into the ear of the all-but-lost leader, who was at once on his feet. Pushing back his wig and staring strangely round the court as one who awaketh from a dream, his eye fell on Alderman S., whom he had met once before at an Assize Ball. "Ah! Alderman S., I hope you're very well?" Delighted at the friendly recognition, the unsuspecting alderman replied, "Quite well, sir, quite: thank you very much." "And Mrs. S.?" The yet more delighted alderman, "Oh yes, sir, indeed: it's very good of you to remember her. She never was better in her life." "And your family?" "Yes, yes, perfectly well, perfectly well. I shall never forget your kindness." "Ah, yes! you may stand down." The damages are said to have been nominal.

Nearly all of the traffic by land between Scotland and that part of England which is now served by the East Coast railways had to come down the precipitous Bottle Bank in Gateshead, and up the narrow and tortuous Side, the principal street of Newcastle, picturesque enough, but decidedly inconvenient. At the top of that steep and difficult thoroughfare stood the "Cock" tavern, whence the mail, the only coach between Newcastle and London, started three times a week, making the journey in two nights and three days. Nearly two days were required to reach Edinburgh, and eighteen hours were all too few for crossing the island to Carlisle. Gigs or comfortables conveyed passengers by land to the towns near

the mouth of the river, and wherries carried those who preferred the passage by water. Persons who could not walk or ride on horseback were borne in sedan-chairs from one part of the town to another. These chairs were still occasionally used half a century ago, and had certain advantages. The lady who, "going out to cards or tea," wished to avoid damp feet, stepped into her chair in her own hall, and out of it in that of her entertainer, without the least exposure to the elements—a luxury unknown in our advanced days.

It seems to us, as we look backwards, that life a century ago must have been a quiet, slow, rather easy performance, with neither telegrams nor telephones, with eightpence to pay on every half-ounce London letter, and only weekly newspapers. But, as I have said, Newcastle was already, and had been for centuries, an important industrial centre. She had almost as much communication by land with the rest of the country as any other large town, and much more by water than even most seaports. The water transit was better adapted for goods than for persons, for the delays were sometimes prolonged. Thomas Bewick was a month upon the voyage when he first visited London in 1776. The custom was to make a bargain with the captain of a "coaster" to take you up for a certain sum (usually a guinea), all found, and, when the chances of contrary winds or calms are taken into consideration, the charges were not exorbitant.

It is difficult to speak with certainty of the actual amount of work done by sea in connection with the port of Tyne a century ago. I find it stated in 1772 that no fewer than 950 ships then entered our port annually; but our fine local song, "Canny Newcassel," was written in 1818, and it says—

"Wiv uz, man, three hundred ships sail iv a tide."

Perhaps we might take a medium course between these two

statements to get at a reasonable approximation to the fact for 1793. At all events, at the earlier date it was also written :—

"The trade and shipping of this place are very considerable, and have always made it of the utmost consequence. Besides its necessary services in supplying a great part of the nation with coals, etc., and the very great revenues arising from thence, it is of the greatest consequence as a nursery for brave and hardy seamen who have always struck such a terror into the hearts of all the enemies of Great Britain, that, whenever a rupture happened with any foreign power, attacks upon this branch of commerce and body of men were always studiously avoided.

"Besides the home and coast trade, the foreign trade of Newcastle, in general, is with Spain, Portugal, France, Holland, Germany, Russia, Sweden, Norway, Denmark, and Poland; besides occasional ships to and from America, the West Indies, etc., and four or five fitted out every season for the Greenland fishery. The manufacture of steel and both cast and wrought iron in this neighbourhood are very considerable; that for wrought iron, at Swalwell, about three miles from Newcastle, up the river, commonly called Crawley's Works, being the greatest in England. Here is also a considerable manufactory of broad and narrow woollen cloth (in Gateshead), and two sugar-houses which have been established here for some time. Likewise two public offices of insurance upon ships and merchandise, and three printing offices whose weekly newspapers circulate several hundred miles."

There was also a dark side to the life of this district at the time of which I write. The punishment of death was inflicted with startling frequency for crimes against property. The stocks were in frequent use. On 23rd October, 1790, "a woman was exalted on a pillory erected on purpose, in the centre of the

Sandhill, for perjury. She was exhibited from twelve o'clock to one o'clock." The terrible scourge of the pressgang was constantly at work, at times arousing bitter but ineffectual resistance. On the 26th April, 1793, "most extraordinary preparations for impressing were made by the crews of the armed vessels lying in Shields harbour. That night the regiment at Tynemouth barracks was drawn up and formed into a *cordon* round North Shields to prevent any person from escaping. The different pressgangs then began, when sailors, mechanics, labourers, and men of every description, to the amount of two hundred and fifty, were forced on board the armed ships." How many of those stolen men ever again saw wife, or child, or home?

Only the year before, "a petition to parliament was agreed on by the inhabitants of Newcastle and Gateshead, for the abolition of the slave-trade. The whole kingdom appeared at this time to be interested in the degraded state of the poor blacks. Newcastle, in particular, has ever been foremost in craving parliament to exert its powers, and do away with that traffic in human flesh." But there was no petition for the poor whites, the "brave and hardy seamen," and yet the poet had said—

> "Skins may differ, but affection
> Dwells in white and black the same."

Highwaymen were not unknown: so near to us as on Gateshead Fell even the royal mail being robbed. And in public places in our city quack doctors were permitted to place themselves, and young women "troubled with a scorbutic disorder," naked in the earth, and covered up to their lips, from noon to six o'clock at night, in the presence of "great numbers who attended to see this curious exhibition."

But we need not dwell too much upon this dark side of our

local life a century ago. Where and when shall we look upon the shield of human existence which is gold throughout? No doubt in some things we are better than our fathers. It would take away the chief inducement to endeavour, if this were not so. More especially has the lot of the poor amongst us gone through a mighty change for the better. But we are constrained to admit that we have lost something in making the gain—

"E'en though better follow, good must pass,"

and with the disappearance of the quaint old houses, and keels, and hustings, and stately processions to meet the judges, much of the picturesqueness has gone out of life. Look at the delightful old picture of "Some Newcastle Worthies," which is one of the recent acquisitions of the Literary and Philosophical Society, and see the 'Change as it once was, and you will be constrained to admit that this is really so.

Thus then, a century ago, Newcastle-upon-Tyne, without railways, steamers, trams, hansom or other cabs, penny post, telegrams, telephones, gas, electric light, daily papers, lucifer matches, primary schools, workhouses, policemen, grain warehouses, docks, slipways, High Level or Redheugh bridges, Elswick works, public libraries, town council, board of guardians, school board, trade unions, household franchise, building societies, co-operative stores, gin palaces, lunatic asylums, or other nineteenth century *fin-de-siècle* joys or sorrows, was a busy and important place, with, for that period, somewhat unusual facilities of communication with the rest of the world. She had abundantly shown that she was fully abreast of other places in the mental activity of her inhabitants. At one time, about the date of George III.'s accession to the throne (1760), there were at the Newcastle Grammar School, under the tuition of the Rev. Hugh Moises, two brothers Scott, William and John, and "a

GROUP OF MERCHANTS ON 'CHANGE (*c.* 1826).

Several of the gentlemen depicted above have been identified. On the extreme left is Sir Thomas Baring, next him Mr. Job Eglan, Mr. Ralph Natrie, Mr. Thomas Legas, Mr. Thomas Cookson, Mr. Nathaniel Clayton (Town Clerk and father of Mr. John Clayton) leaning on his stick, and Alderman Forster, with hands in pockets, in the centre. A little behind him stands Alderman Cramlington, then Alderman Clayton, and Mr. Bewick in black; whilst Mr. Crowley and Mr. Surtees flank, on either side, Mr. Crau, who is making the liberal display of pocket-handkerchief common to snuff-takers. The famous Recorder, Mr. Hopper Williamson, is the prominent figure on the right.

pretty and gentle boy," somewhat their junior, Cuthbert Collingwood. They were all to achieve great things, and to attain high rank amongst England's noblest sons. William Scott, better known to history as Lord Stowell, presided over the High Court of Admiralty at a time when "England became the sole occupant of the sea, and held at her girdle the keys of all the harbours upon the globe." He framed and established a just and comprehensive system of maritime law, in decisions which are remarkable alike for their logical acumen and their classical style, and which have been accepted as having authority by every civilised nation in the world. His younger brother, John Scott, who became Lord Eldon in 1799, when he was made Chief Justice of the Common Pleas, held the proud office of Lord High Chancellor of England for a longer period than any other person before or since, "and, during a quarter of a century exercised an influence almost unprecedented in the Cabinets of successive Sovereigns." And Cuthbert Collingwood,—the simple sailor, the stainless soul, the great admiral, who sleeps in St. Paul's Cathedral by the side of his not greater comrade, Lord Nelson,—combining loyalty to duty with courage and gentle courtesy, gave to our history one of the most heroic and beautiful lives which its pages record.

But, a century ago, a change, undreamed of by any of the men whom I have named, was already beginning to show itself—a change which was to pass over the spirit of the world. The mighty deeds of the future were to be those, not of the lawyer or the warrior, but of the man of science, still looked upon but as an idle dreamer or a machine-maker a century ago. No small share in those mighty deeds was to fall to our good old town, and in the brilliant scientific achievements of her most distinguished sons, the Society whose story I am to tell has borne an honourable part.

CHAPTER II.

OUR PREDECESSORS.

FOR England and France the eighteenth century was a period of mental emancipation, which resulted for both in a new life in all departments of thought, and ultimately for both in political revolution and the partial reformation of society. In looking back upon great movements, accidental or abnormal phases of an exceptional and transitory character are apt to claim an undue proportion of the view. The long period of incubation, the many patient processes of preparation, the gradual growth and fructification of the mental seed, are too often lost sight of, to the injury of truth. Thus comes the too popular idea that Nature delights to indulge in spasms, to work by fits and starts, rather than to carry forward, slowly but constantly and certainly, quiet, orderly, and continuous operations.

And thus the brutal excesses of the later years of the French Revolution forced themselves upon the attention of all men, and hid the wholly beneficent operations of the earlier years of that mighty event. The indignation and horror which such orgies of blood-thirstiness aroused, prevented the observation that they were but the inevitable outburst of accumulated and violently restrained beliefs—beliefs as to man's position on earth, the real nature of government, and the like,—the outbreak necessarily

consequent upon the mad attempt to check the general tendency towards freedom which had been growing in strength and intensity, and becoming more widely diffused throughout the century. This tendency had been fostered and developed by the influence of English thought upon the French mind. Half a century before the commencement of this great period, Englishmen had gone through the intense and actual struggle which attends, in a progressive country, the permanent limitation of the kingly power. Their philosophers had availed themselves of the comparative licence to publish freely that which was in them which, in its fulness, Milton had pleaded for so nobly; and which, though as compared with that of the present day but slight, appeared complete and wonderful when contrasted with the censorious repression which prevailed in France. Here the right and reason of all things were widely canvassed, but the minds of the great English thinkers were especially turned to political and economic questions, and even upon these, though with many restrictions, they had much freedom of thought and expression; and thus from France the men of thought, who had yet to see and learn what freedom meant, poured into England in great numbers. "The civilised world was restless with dreams of political emancipation; it trembled with expectation of a deliverance yet to come." And because, here in England, although not without some peril of pains and penalties, men had long been used to think for themselves and to speak out their thoughts, England became, as it were, a school for French thinkers in every department of investigation. "During the two generations which elapsed between the death of Louis XIV. and the outbreak of the Revolution, there was hardly a Frenchman of eminence who did not either visit England or learn English; while many of them did both."

It has indeed been brought as a kind of charge against

the mental character of the English people that, whilst the philosophy of the eighteenth century was born there, it could only be developed in France; that in England there was much speculation but it was divorced from even the idea of practical application, whilst in France the two were ever united. But surely this is a somewhat too impatient manner of looking at such a question. It is not the fact that the French came to England empty. On the contrary, they were filled with new ideas and came to men filled with new ideas, and it was not the case of master and pupil between the two, but rather that of the flashes of soul light struck out by the friendly but fearless attrition of equal minds. The result was reached more quickly in France, more surely in England. The hasty eagerness for immediate application of the new ideas bore fruit in the Revolution; their patient and gradual enforcement in the Reform Bill of 1832.

The mental ferment in England was by no means confined to the metropolis. On the contrary, philosophical investigations were widely indulged in, and questions of the first political importance were debated, in many different parts of the country. Indeed, the Government of the day concerned itself very much about the amount of argument which went forward everywhere, and laws were repeatedly passed to regulate and restrain the Debating Societies of that day, which would have been as useful and as void of offence as those of our day if the Government had wisely let them alone. Some of the questions discussed, and which related to what we now speak of as "the Land Question," were treated of from points of view not widely dissimilar to those of Mr. Henry George or Mr. Alfred Russel Wallace, and one of these discussions gave considerable trouble and annoyance to our Literary and Philosophical Society in its youthful days. As even yet the story is not infrequently told

incorrectly, it is perhaps worth while to set out the truth about it in this introductory chapter.

Amongst the eminent Frenchmen who visited England towards the close of last century was "People's Friend" Marat. He settled down for some time in Newcastle as a veterinary surgeon, and it is probable that he there wrote his *Chains of Slavery* in English. In 1774 it was published anonymously, but in the following year it came out with the author's name, and was advertised on the 28th of October and the 4th of November in the following manner:—

> This day is published, price 10s. 6d.,
>
> And sold by J. Almon in Piccadilly; T. Slack, W. Charnley, and E. Humble, in Newcastle; J. Graham, in Sunderland; J. Pickering, in Stockton; N. Thorn, in Durham; E. Lee, in Hexham; and A. Graham, in Alnwick,
>
> THE CHAINS OF SLAVERY:
>
> A work in which the clandestine and villainous attempts of Princes to ruin Liberty are pointed out, and the dreadful scenes of Despotism disclosed.
>
> To which is prefixed,
>
> An Address to the Electors of Great Britain, in order to draw timely attention to the choice of proper representatives.
>
> By J. T. Marat, M.D.
>
> *Vitam impendere vero.*

Whether the one had or had not anything to do with the other I cannot say, but upon March 15th, 1775, a small Philosophical Society, for the consideration of questions of mental and social philosophy, was started in Newcastle. It held its meetings somewhere in Westgate Street, but its deliberations do not appear to have been very attractive, for it never had

more than twenty members, and it would have been unknown to fame if it had not chanced to include amongst them a certain Thomas Spence, who is not yet forgotten, and who still has followers.

The Society was too painfully didactic for its own or any other day, as the questions discussed at the first two meetings show pretty plainly. At the first gathering, after a lecture the title of which is fortunately swallowed up in night had been delivered, the subject of debate was: "Which of two persons, equally qualified, is most likely to attain first to a distinct knowledge of any intricate subject, he who searches into it by contemplation and the help of books only, or he who attends a well-regulated society, where the subject is freely debated, as a question, on both sides, or demonstrated by the joint endeavours of the members?" "After being ably discussed for about two hours, the question was at last determined in favour of the latter proposition." Very right and natural, and quite to be expected: "our noble selves."

The second problem was as priggish as the first: "Whether does an exquisite sensibility of mind make for or against the happiness of the possessor?"

These are emphatically the questions which, at all events in this country, can only be discussed with relish and eagerness by very young men who have not come much into contact with actual life, or learned how vain a thing disputation is. There is a time for mental exercitation of the kind, which most mortals pass through, most thinking mortals, just as there is a time for writing the youthful verse which all ends in the grave or heaven. These are, like the distemper with puppies, or the chicken-pox or measles with children, incident to young healthy life, and need not give alarm to the most anxious parents. They may safely be left to the *vis medicatrix Naturæ*.

But these considerations make it less likely, although of course it is still possible that, as has been frequently suggested, Marat himself was the instigator, if not the founder, of this Society, or, at all events, attended its early meetings. This is simply a supposition. There is no evidence whatever upon the matter. But it is rather interesting to note that, on the 25th October, 1775, the question brought forward for discussion was, "Which is the better form of Government, a Limited Monarchy, as in Great Britain, or a Republic?" and a majority of two decided that "a Republic might be formed productive of more real advantage to the governed than can be effected by a Limited Monarchy like our own." We shall hear more of this Society shortly in connection with the Thomas Spence who, as I have mentioned, was one of its members. We shall see how, like some other societies and multitudes of individuals, these philosophers had no objection to a wide and general proposition, but how they shrank terrified from any attempt to carry their theories into practice, or, it might be more correct to say, to develop them in specific directions.

Thomas Spence was born on the Quayside of Newcastle on the 21st June, 1750, his mother being an Orkney woman, the second wife of an Aberdonian who was blessed with nineteen children. Thomas became a clerk in a merchant's office, but was one of those singular youths who are filled with ideas. In very early life he constructed a phonetic alphabet which had forty letters, each of which was to represent a separate and distinct sound. This he expounded in the "Grand Repository of the English Language," published by subscription, and in the "Repository of Common Sense and Innocent Amusement," which he brought out in penny numbers. This latter work was given to the public before the author was twenty-five years old.

We learn the most about him from his friend Thomas Bewick, who would seem to have been brought into contact with him when cutting the steel punches for his types. Bewick says of him, "He was one of the warmest philanthropists of the day. The happiness of mankind appeared to absorb with him every other consideration."

He was just the man to become a member of any philosophical society, for amongst his most cherished ideas was that of property in land being every man's right, and before the Newcastle Society was eight months old we find him bringing his favourite thesis before it. We know nothing of how it was received, but we do know that he printed and published it, apparently immediately after reading it to the Society. This gave dire offence, and his fellow-members, with due solemnity, on the 22nd of the same month (November, 1775), "expelled Mr. Thomas Spence for publishing without and against the approbation of the Society a lecture with the title of 'Property in Land every One's Right,' which he had delivered at a former meeting, of which they disclaim all patronage, being informed that he had previous to the lecture read it in different public-houses, and became a member, apparently, for the purpose of intruding upon the world the ERRONEOUS and dangerous levelling principles with which the lecture is replete, under the sanction of the Society."

Happy public-houses! Alas, poor Society! And it lives now in the recollection of any portion of mankind only because of this paper, cast forth as an abominable thing; and it died speedily after it got rid of the author, as it ought to have died,—but when—no man knows or cares.

I have recently come across the rules of this Philosophical Society, which was indeed only an early debating society, and I think that it is worth while to quote one or two of them, for they

throw some light on the mental attitude of those young people who were, at this interesting period, so far advanced as to wish to belong to such a body, but who were otherwise staid and respectable members of society generally.

The rules in question were adopted on 13th February, 1777, "by the Society, Westgate Street, Newcastle," and were evidently prepared with direct reference to Mr. Spence's paper read and condemned fifteen months previously.

"The intention of this Society is, to enable its Members to speak with Facility on every Subject that comes before them, to collect and arrange their Ideas, and not to admit, without Examination, the Force of any Argument however specious: to accomplish these Purposes, the Members of this Society propose, each night of meeting, to discuss some Question, or elucidate some Proposition, with all the Freedom of Debate that is consistent with a decent Attention to those established Opinions, on the Belief of which the Welfare of Society in a great measure depends."

Good, sound, sensible young people! It is self-evident that Marat and Spence were no fitting comrades for such as you. "If these things be done in the green tree, what shall be done in the dry:" if these were the youth of that *fin-de-siècle*, what were the old fogies like?

> "Oh, 'tis hard to believe that our parents were so good,
> So ridiculously good, so preposterously good;"

but they understood, at all events, the art of making smooth the outside of the cup and the platter.

"The Utility of a well-regulated Institution of this Nature will scarce be denied, but some Objections have arisen from the Conduct of other Societies established with similar Intentions, which are too well founded not to require some Notice.

"The most important of these Objections are, that Meetings of this kind too frequently degenerate to drinking Clubs, and that they become Schools of Sedition and Infidelity; to obviate the first, it will be sufficient to observe, that the Meetings of this Society are held in a private House, and every Sort of Liquor absolutely excluded, and Precaution is taken to prevent the second, by admitting no Question till it is allowed to be fit for Debate, by a Majority of Opinions taken by Ballot; by which means, there is an Opportunity to reject any Subject, which might lead to Arguments, too freely and incautiously calling in Question, the fundamental Principles of Religion or good Government. And, that no imputation of Vanity may arise to the Society for the Name they have assumed, they wish to have it understood that they adopt the original meaning of the Word PHILOSOPHY, which implies the Desire not the Possession of Wisdom."

A priggish, conservative sort of society, with plenty of limitations, but unsparingly liberal in the use of commas and capital letters. They met every Thursday evening at six, and parted at eight; each member subscribed 6d. a night to meet expenses "and support a fund for charitable purposes;" speeches were limited to eight minutes each, but a member might speak any number of times; and there was power of expulsion, the general causes being "attempting to injure the Society by Scandalous Aspersions, refusing to comply with its Rules, or outrageously violating good Order and Decorum."

This was clearly too respectable a body for a man of original thought, erratic ways, and short temper, like Thomas Spence. It was quite too good to live, and the gods took it early.

Thomas Spence had given up clerking, and had become a schoolmaster in the Broad Garth, and, in order to make converts to his views, he started a debating society of young

men, who met in the evenings in his school-room. Like certain other great reformers, he was rather impatient of opposition. "One night," says Thomas Bewick, "when his favourite question was to be debated, he reckoned upon me as one of his 'backers.' In this, however, he was mistaken; for, notwithstanding my tacitly assenting, in a certain degree, to his plan—viz., as to the probability of its succeeding in some uninhabitable country or island—I could not at all agree with him in thinking it right to upset the present state of society by taking from people what is their own; and then, launching out upon his speculations, I considered that property ought to be held sacred; and, besides, that the honestly obtaining of it was the great stimulant to industry, which kept all things in order, and society in full health and vigour. The question having been given against him without my having said a word in his defence, he became swollen with indignation, which, after the company was gone, he vented upon me. To reason with him was useless. . . . 'If I had been as stout as you are, I would have thrashed you; but there is another way in which I can do the business, and have at you.' He then produced a pair of cudgels, and to work we fell. He did not know that I was a proficient in cudgel-playing, and I soon found out that he was very defective. After I had blackened the insides of his thighs and arms, he became quite outrageous, and acted very unfairly, which obliged me to give him a severe beating."

This early and novel proof of "Bewick's wood-cuts" furnishes another evidence of the truth of the famous old line—

"The falling out of faithful friends renewing is of love."

The friendship between the artist and the philosopher was but cemented by their mutually striking arguments. In 1776 Spence received an appointment as teacher in the Grammar

School at Haydon Bridge, and there Bewick, then twenty-three years of age, visited him, and happy times they had, wandering through that lovely country which the great artist knew and drew so well, and loved so much. But Spence was a restless and arbitrary being, as became the inventor of schemes for universal and lawless liberty. He removed to London, that constant cave of Adullam, where he hailed from the Hive of Liberty, No. 8 Little Turnstile, High Holborn, and there he brought out a weekly paper, which was illustrated by strange plates, and which he called "Pigs' Meat, or Lessons for the People, *alias* (according to Burke) the Swinish Multitude." Before long he came into direct conflict with the authorities: he was fined and imprisoned repeatedly, and on one occasion for twelve months; and, after learning by much and bitter experience the inconvenience of being in advance of his time, he died on the 5th September, 1814, and his admirers gave him a public funeral, and formed a society in his memory, and for the discussion and propagation of his views, and called themselves the Spenceans, after his honoured name.

But what was this evil paper, the product of Thomas Spence's early days, which sorely troubled the spring-time of our Literary and Philosophical Society, and which has quite recently been republished by ardent admirers? What was it all about? The title, "Property in Land Every-one's Right," has a somewhat philosophical sound in these days, but seemed revolutionary enough when it appeared, and revolution was what Spence desired. He proposed that landlords should be abolished, and that all land should be held by parishes, which should have no right of alienation. But the parishes were also to have powers which, in the lengthy debates on the Parish Councils Act, no one dreamed of asking for them. Every man was to have a vote; each parish was to be a corporation; the

land, with all that appertains to it, was to be its property; and it was to have all power over such land, except that of alienation. There were to be no more or other landlords in the whole country than the parishes, and each of them was to be sovereign lord of its own territories.

The people were to pay their rent into the parish boxes, and it was to be employed by each parish "in paying the government its share of the sum which the parliament at any time grants; in maintaining and relieving its own poor, and people out of work; in paying its clergymen, schoolmasters, and officers, their salaries; in building, repairing, and adorning its houses, bridges, and other structures; in making and maintaining canals and other conveniences for trade and navigation; in planting and taking in waste ground; in providing and keeping up a magazine of ammunition and all sorts of arms sufficient for all its inhabitants in case of danger from enemies; in premiums for the encouragement of agriculture, or anything else thought worthy of encouragement; and, in a word, in doing whatever the people think proper."

This is a tolerably comprehensive measure of local self-government; but Thomas Spence went much further. The ballot was always to be used in all voting, in order to avoid animosities. "Buildings, clergymen, etc., for the established religion of the country were to be maintained by each parish out of its treasury, but dissenters, if they set up any other religion, must bear the expence of it themselves." But each parish was to have the power of putting the laws in force in all cases, even to the inflicting of death; and government was only to interfere when any of the parishes acted manifestly to the prejudice of society and the rights and liberties of mankind as established in their glorious constitution and laws. "For the judgment of a parish may be as much depended upon as that of a house of lords,

because they have as little to fear from speaking or voting according to truth, as they."

Perhaps it is true that to-day, in this England of ours, "a man may speak the thing he will," but, when the eighteenth century was beginning to grow old, it required some courage to write as Thomas Spence wrote. His paper is well worth reading, for it is full of interesting points, and furnishes, in some measure, a standard by which we can gauge the progress which has been made in the mental attitude of people generally to several important questions. Political problems which have, even yet, not entered the realm of practical politics, although they are in the nearest border-land, were the cause of much disturbance in, and were living matters to, one member of a speculative society a century and a quarter ago. The world of mind moves slowly. Where should we find to-day a man who longed to abolish all private holding of land, and who would intrust parish councils with absolute power in domestic affairs, and who at the same time advocated the more complete establishment and endowment of the State Church? But the most valuable feature of the paper is that it clearly shows how widely the speculative character of the thought of those times, which had so great an effect upon French thinkers, and was to develop so rapidly in France into cataclysmal action, had permeated the whole of our country.

For we may thus take courage, and possess our souls in patience, when, from time to time, a rising wave of generous, impulsive ignorance of or indifference to facts threatens speedily to sweep away every ancient landmark which our fathers have set, however necessary for the true steering of the ship of the State such landmark may be. Men learn by slow degrees that actual life needs actually working machines, not successful laboratory experiments.

But, for my present purpose, the only important point about the reading of an original and flighty paper before this little Philosophical Society in Newcastle-upon-Tyne, is that our own Society had, from the first moment of its existence, to dissociate itself entirely from any suspicion of a connection, however slight or remote, with that which had numbered amongst its members, for however brief a period, so dangerous an innovator as Thomas Spence. The appointment of a certain Robert Spence as Librarian in 1797 may have lent some colour to the supposition that the Literary and Philosophical Society was but an expansion of the earlier Philosophical Society. At all events, at a General Meeting held on 11th December, 1798, it was reported that "an extract was inserted in the Annual Register for 1792 (just published) from a paper purporting to have been read in a Philosophical Society in this town, which might be very injurious to the reputation of this Society, if it should be generally understood to have been printed with its sanction," and it was resolved "that the Committee be empowered to refute an application which has been made of the above article to the discredit of the Society."

And so the Committee duly printed a statement in the local newspapers, and sent it to the Editor of the *Annual Register*, the *Gentleman's Magazine*, and the *Monthly Magazine*, pointing out "that the Literary and Philosophical Society of Newcastle-upon-Tyne having had no existence until February, 1793, could not possibly have had any concern in a transaction not later than the year 1792." The grammar may be doubtful, but the meaning is plain and the inference obvious. They further stated that it had been a fundamental rule of the Society, which in no instance had been departed from, "that Religion, British Politics, and all Politics of the Day, shall be deemed prohibited Subjects of Discussion."

And here it might reasonably be supposed that all difficulty would have ended, and for ever. But such was not the case. In 1803 the Committee, in the course of an explanation of the care taken by them to prevent religious and political debates, refer to this charge, founded upon a passage in the *Annual Register*, as "a most gross and foul calumny." Thirteen years afterwards, in 1816, "an article in a celebrated periodical journal 'revived' the absurd and groundless imputation that the wild visions of Spence, with regard to property in land, had in any form originated" in this Society. The Committee were so much troubled and pained by this suggestion that they furnished the President, who was then in London, with the full detail of all the circumstances connected with the original production of Spence's paper, and, through the medium of Mr. Cookson, one of the Vice-Presidents, they transmitted a duplicate of this "detail" to the Right Worshipful the Mayor of the Borough. But they even went further than this. "Impressed by an anxious concern to preserve the Society perfectly clear of all imputations of interference in political or religious subjects," they found it necessary to declare a vacancy in the office of Librarian.

Why? The name of that official was not Spence but Marshall. At an earlier period of the Society's history, as I have mentioned, Robert Spence had been appointed Librarian in spite of his objectionable name. But Mr. Marshall was an author, and under the date 4th February, 1817, I find the following Minute:—

"The Committee having referred to the VII. Law of the Literary and Philosophical Society, in which Religion and British Politics are declared to be prohibited subjects of discussion, Resolved

"That Mr. Marshall, having printed and published a Pamphlet, entitled, a Political Litany, in which both the above

subjects have been introduced in a manner calculated to injure the reputation and interests of the Society, is no longer Librarian to the said Society, and the Treasurer is hereby authorized to pay his Salary up to March next."

It seems rather a high-handed and arbitrary proceeding this sudden dismissal. The Committee appear to have thought that the prohibition contained in the Law extended even to discussions without the walls of the institution, and the members seem to have acquiesced in the extraordinary interpretation. They took care that no question should arise with future holders of the office, for they enacted:

"That he [the Librarian] be careful to avoid all employments and pursuits which may be inconsistent with the duties which he owes to this Society as its Librarian,—more especially, that he shall in nowise interfere or concern himself with any disputes which may at any time arise among the several members of this Society. And that, in general, the Society expect that he do as Librarian not mix in the concerns of any particular party, either of Religion or Politics."

To us it, no doubt, appears strange that the Society should have felt so strongly upon small matters, and yet, until but a few short months ago, we all still recognised that it was well to keep religion and the politics of the day, the two subjects upon which feeling runs more strongly than it does upon any others, without our walls. There seemed to be manifest advantages in having one place, at all events, where men of all parties and creeds could meet upon the neutral ground of common interests and sympathies. Younger and, possibly, wiser men have proposed to change all that, but so far unsuccessfully.

> "Old things need not be therefore true:
> No, fellow-men, nor yet the new."

Again: we must not forget that ours was really a pioneer

Society. When ours was formed, there was only one other of the kind in provincial England, and that was the Literary and Philosophical Society of Manchester, which held its first meeting twelve years earlier, on 14th March, 1781. Its commencement was consequent upon the example set by many towns in different parts of the Continent, where, the Preface to the first volume of its Transactions (published in 1785) states, "numerous Societies for the promotion of Literature and Philosophy have been formed in the course of the last and present centuries." France is specially mentioned as the country where "societies for these purposes have been instituted in several of the provinces," whilst "in England they have almost been confined to the Capital."

If we reckon amongst "learned bodies" the Christian Knowledge Society, and bear in mind the Royal Irish Academy, the Royal Society of Edinburgh, and the Highland Society, ours was the twelfth, in order of date, to be started in the United Kingdom. In the year of its birth, 1793, the Royal Society of London for improving Natural Knowledge was nearly a century and a half old, but, with the exception of the Linnæan Society, which was founded in 1788, there was not a single association of learned men in this country devoted to the special investigation of any one branch of natural or physical science. The Royal Institution began its labours in the year 1800; the Geological Society in 1808; the Royal Astronomical Society in 1820; the Zoological Society in 1826; the Royal Geographical Society in 1830; and the Chemical Society did not make its appearance until 1841. So that our Society came into being at a time when there were only three learned societies in the metropolis itself, and when, with the single exception of the good city of Manchester, none of the great English towns, which we now look upon as the principal commercial or manufacturing centres of light and learning, could boast a Society at all.

We must not forget that the time was a critical one. Seventeen days before our Literary and Philosophical Society first met, Loûis XVI. was guillotined in Paris, and at once one of those great waves of public feeling swept over England which, even with the graver, calmer, and more thoughtful men, destroy for a time all power of reflection or discrimination, and the effect of which only the long lapse of years can eradicate from the popular mind. The whole land went into mourning, and all that savoured of France was abhorrent to all good English citizens. Edmund Burke's *Letters on a Regicide Peace* tells us, with startling clearness, how mad, upon matters relating to France and the French, sane men and great leaders of men had become.

Though there were those who kept their heads, and remembered that, bad as the French Revolution became when "a separation (was) made between liberty and justice," yet the outbreak was only possible because the woes and wrongs of an entire people had become intolerable, we cannot be surprised that, for a time, any innovation was looked upon as rash, and that the charge of being responsible for the promulgation of revolutionary doctrines was not one which a quiet and orderly Literary and Philosophical Society in a provincial town could patiently rest under.

When this Society had reached the fiftieth anniversary of its establishment, poor Thomas Spence, whose only faults were that he thought for himself and was in advance of his time, was once again dragged forth in connection with it. In a paper which Dr. Glover read on that occasion, and in which he gave a brief sketch of the history of the Society up to that year, he speaks of "the founding of a Debating Society in 1777, of which the celebrated or notorious Spence was a member, but from which he was expelled for hawking about the streets a pamphlet in

which he expressed some of his wild views. This occurrence was afterwards the cause of some obloquy being directed by mistake against the Literary and Philosophical Society, as if that Institution had been political at its commencement."

This statement is specially interesting because of its want of accuracy—even the date being incorrect.

This, then, is the history of the Philosophical Society which preceded the Literary and Philosophical Society, and which, although in olden days frequently confounded with it, had really nothing whatever to do with it.

But another Society came into being towards the end of last century, which certain writers have erroneously supposed contemplated to some extent the work which this Society afterwards took up. On the 1st November, 1786, the Gentlemen of the Medical Faculty in this district resolved to form a Philosophical and Medical Society. From the Rules of the Society it was apparently not intended to be confined to members of the medical profession, nor is there anything to show that the papers to be read at its monthly meetings were to be restricted to any special class of subjects. Upon the 7th February, 1787, a committee was formed to draw up the outlines of a general library, and this was certainly meant to be for the town generally. The proposals which they prepared set out with the following declaration :—

"A number of gentlemen, sensible of the Advantages that will result from the Establishment of a General Library in this Town, have entered into a Subscription for that purpose, and wishing for the Approbation and Concurrence of others, take this method of communicating the Outlines of their Plan to the Public."

The first proposal ran thus: "The Library shall consist of the most approved Authors in every Branch of Philosophy : in

the Belles Lettres, History, Theology, Law and Medicine, Agriculture and Commerce; but Romances, Novels, and the like shall be excluded." Philosophy, in those days, had a much wider meaning than we give to it now. It more nearly corresponded to the term Science as we use it popularly. "Natural Philosophy" is no longer heard amongst us, and "Natural Science" is almost as rare. Dr. Johnson defined "Philosophy" as "Knowledge, natural or moral," and "Science" as "Knowledge, pure and simple." But, as in the Literary and Scientific Societies of our time, the Natural Sciences are most generally intended, so, in the Literary and Philosophical or Philosophical and Medical Societies of a century ago, it was the philosophy of Buffon rather than that of Berkeley which was thought of.

I gather from the records of the Society that all its actual members belonged to the medical profession. Certainly the whole of the papers read at its meetings were technical, and it was practically a medical society and nothing else. It was not highly successful in point of numbers at all events, and it was finally dissolved in November 1800, its books being transferred to the Medical Book Club, which had been formed in May 1790.

This Club consisted of thirteen members, who met at each other's houses once a month at eight o'clock, breaking up at eleven. "The Member at whose house the Club meets shall furnish a Supper, consisting of Cold Beef, Bread and Cheese, Malt Liquor, and Spirit and Water. If any Member wishes for Wine, he may call for it." The books belonging to the Club were "lodged in a Book Case in the possession of the Librarian of the Literary and Philosophical Society," according to a Club Minute of November 1799.

Thus, then, the learned Societies of which I find any record

as existing in this City before the Literary and Philosophical Society's date are the Philosophical Society which expelled Spence, and the Philosophical and Medical Society which died in 1800. The more convivial Club had a much longer existence, changing its name to "The Medical Society," and only dying of extreme old age in the year 1875.

CHAPTER III.

THE BIRTH AND INFANCY OF THE SOCIETY.

THERE are few men to whom the town of Newcastle-upon-Tyne is more deeply indebted than it is to the Rev. William Turner. When scarcely twenty-one years of age, at the beginning of 1783, he became the minister of the Unitarian congregation worshipping in the Hanover Square Chapel. Here, in the following year, he started the first Sunday-school in Newcastle, and, under his charge, which continued for fifty-eight years, this chapel became for the town and district a focus of light and learning. The history of our Society is indissolubly connected with it, for not only was Mr. Turner its founder, but many of its most valuable members sat under his genial ministrations. It is not too much to say that for more than half a century he was foremost in every movement which had for its object the social, moral, or intellectual welfare of the community, and the good work he did was not "interred with his bones." He lived until the year 1859, when he died at Manchester, at the age of ninety-seven years. The Society still possesses an excellent portrait and bust of this good man and worthy citizen.

In the winter of 1792 a few friends who met weekly for the purpose of conversation discussed the formation of a conversational society, and Mr. Turner was asked by them to draw out

a sketch of the arguments for such an Institution. The following week he produced a paper which he called "Speculations on a Literary Society." This was circulated in manuscript, and it aroused such interest that a meeting of a more general kind was called to take the matter into consideration, and was duly held on the 24th January, 1793, in the new Assembly Rooms in Westgate Street.

These rooms, which have seen so many changes in their surroundings, are still fulfilling their important social functions with stately grace. The present generation have no recollection of the garden attached to the Vicarage House of Newcastle, whose trees gave a certain charm to Westgate Street less than forty years ago, but that garden was much smaller than it had been at the middle of last century. Upon part of the old garden the new Assembly Rooms had been built by subscription. They were opened on the 24th June, 1776, and "a very numerous and brilliant company" gathered to hansel them. The inscription which, two years before, had been placed under the foundation-stone is perhaps worthy of preservation. It ran thus:—

"In an age
when the polite arts,
By general encouragement and emulation,
Have advanced to a
State of perfection,
unknown in any former period:
The first stone
Of this edifice,
Dedicated to the most elegant recreation,
Was laid by William Lowes, Esq.,
On the 16th day of May, 1774."

The meeting of the 24th January, 1793, was convened "for

THE VICARAGE, WESTGATE STREET, 1856.

the purpose of taking into consideration the propriety of establishing a Literary and Philosophical Society in Newcastle," and the matter seems to have been introduced by the Rev. William Turner reading the paper which I have already mentioned, and the full title of which was "Speculations on the propriety of attempting the establishment of a Literary Society in Newcastle." There is no information available as to the other proceedings, and even the name of the chairman is unknown.

As upon this paper our Society was founded, I shall describe its argument in some detail.

After a brief introduction, in which allusion was made to "the Royal Society in London, which was the first in order of time, and continued to claim the first place among the Literary Societies of Europe," and to the fact that, amongst the provincial towns of England, Manchester alone possessed such a Society, Mr. Turner proceeded to discuss whether such provincial Literary Societies might not become more general. They would act as nurseries to the larger and more important institutions; would diffuse more extensively a taste for philosophical and literary enquiries; and would answer a salutary moral purpose. "Might they not be expected to increase the pleasures and advantages of social intercourse, by providing an easy method of spending the evening agreeably and usefully; and may they not thus be a means of checking the first formation of dissipated habits; of banishing from our tables the coarser pleasures of intemperance; and of substituting for the always trifling, and frequently destructive, pursuits of the gamester, the rational and manly entertainments of literature and philosophy?"

He next explained that the circumstances which had induced him to look upon Newcastle as a favourable seat for such an institution as he contemplated, were—

First, the two great natural products of this part of the

country—coal and lead. Under this head he pointed out how "the origin and chemical properties of coal, the position in which it is found in the earth, the thickness and inclination of its strata, the nature of the strata above and below it, and the frequent interruption by perpendicular fissures called dykes, troubles, etc., were curious and interesting objects of enquiry, concerning which the ingenious persons who are employed as *viewers* are capable of supplying better information than can be obtained any other way. To these gentlemen, on the other hand, the speculative philosopher might perhaps have an opportunity of returning the obligation, by communicating useful hints concerning the nature of the several damps and vapours which infest the mines, with the view of destroying or removing them."

Mr. Turner mentions also improvements in machinery, both above and below ground, and thinks that "the speculations of ingenious men in this line" might afford both entertainment and advantage. Perhaps the French wit who found that the English took their pleasures sadly, had heard of this curious idea of entertainment. But he goes on to speak of improvements in the method of working the coal, and in the means of preserving the health, and providing for the safety of the miners.

He makes similar observations respecting lead, laying stress upon "what concerns the health of the workmen employed in all the branches of it, from its first discovery in the mine, to the manufactures in which it is even most remotely concerned." He alludes to the various manufactures which depend upon the plenty and cheapness of fuel, and suggests that a Society of the nature he contemplates might point out and encourage the establishment of such as are, on this account, peculiarly adapted to this country. He shows also how Newcastle enjoys special advantages for chemical investigations, and the opportunity afforded of seeing many chemical processes "at the works of

various ingenious persons residing in this town and neighbourhood."

The second object of such a Society would be to enquire how far the country was still improvable. Mineral treasures might yet be discovered; hints might be given for the advancement of agriculture; and the arguments for and against facilitating communication by means of inland navigation might be canvassed. Again, the mineral waters found in the district, and those which supplied this town, might be carefully analysed, and perhaps further hints given for obtaining a better supply.

Thirdly, the romantic scenery, especially on the banks of the Tyne, and other rivers, would furnish a variety of subjects for the pencil, and for the lover of picturesque description, and these might occasionally entertain the Society.

Fourthly, the profusion of antiquities, not only in Newcastle, but all along the Roman Wall, "which, though they have furnished abundance of employment for many pens, are not yet by any means exhausted, will engage the attention of the patient enquirers after these venerable monuments of extinct nations customs, and religions."

It is interesting to note, as we go through this paper upon which our Society was founded, how many of the hopes to which Mr. Turner gave expression a century ago have been amply realised. The coal trade has been enormously developed, and "the several damps and vapours which infest the mines" have been, on the whole, successfully grappled with. The lead and chemical industries have taken innumerable forms then all undreamed of; the town supply of water has attained, what would have appeared to Mr. Turner, impossible proportions; Thomas Bewick, old Tom Richardson, and other future members, have entertained wider audiences than the Society with "the subjects for the pencil;" and the "profusion of antiquities"

alluded to owe their preservation and elucidation in a great measure to two gentlemen who, for many years, took a deep and active interest in the Society's work, our late Vice-presidents, Mr. John Clayton and the Rev. Dr. Bruce.

Under his fifth head Mr. Turner mentions an exact enumeration and classification of the inhabitants of the town. This had not at that time been attempted. Many guesses and calculations had been made, but with widely differing results. There was still a strong religious superstition against the State undertaking such a task. He went on to suggest as subjects for inquiry the history and progress of commerce, particularly of the coal trade; accounts of the introduction and gradual extension of the various manufactures, "and of the regulations for the internal government of the workmen employed by Crawley's company at Swalwell, which, I am told, are very curious, though probably but little known."

Crawley's company deserves a passing word. Few people now know even the name, and yet it was for some time one of the most important manufacturing companies in the whole country. Sir Ambrose Crowley, towards the end of the seventeenth century, "first fixed upon Sunderland near the Sea, as an eligible situation for his projected manufactory; but, after an experience of five or six years, he transplanted his Cyclopean colony to the district between the Tyne and Derwent, a cheaper country, and abounding with coal." This was about the year 1690. Winlaton corn-mill was turned into an iron forge, and ironworks were started also at Swalwell. Anchors, chain cables, pumps, spades, saws, "in short, almost every form of which iron and steel are susceptible were produced in these works."

Sir Ambrose Crowley was a Staffordshire man, who worked his way up from the anvil. He lived in London, and had ware-

houses and wharves for the purposes of his great business operations. These places he called "The Doublet," and the sign which he placed upon them is said to have represented the leather jerkin in which he worked when a smith. He was knighted in 1706, made Sheriff of London in 1707, and afterwards became an alderman for that city and Member of Parliament for Andover. He is an interesting specimen of the self-made man, and that not so much because he managed to get rich and to die leaving great estates and works and a fortune of £200,000, but rather because he was a man of advanced ideas upon the labour question, and that two centuries ago.

His works were regulated by a special code of laws, which "had the happiest effect in reconciling differences, administering justice expeditiously, and rendering unnecessary the oppressive, absurd, and ruinous processes of the common law." The laws were administered by the officials, but all disputes were settled by a court of arbitrators, amongst whom all the different interests of the great concern were represented, and which met at stated intervals. The laws dealt with most of the matters which are now relegated to the County Court or to Petty Sessions, and questions of debt to outside tradesmen as well as to fellow-workmen, wages, work, personal disputes, bastardy claims, and the like, were brought before and decided by "Crowley's Court." The sick, aged, or permanently disabled were cared for; a surgeon was appointed to attend all who required his services; widows and orphans were assisted, and schools were established for the workmen's children. In 1819 the workmen formed and opened a library at Winlaton, which contained three thousand volumes. To provide the necessary funds for the different social operations I have mentioned, deductions of so much in the pound were made from each man's wages, the firm also contributing its quota.

I have been led rather far away from Mr. Turner's paper by his allusion to "Crawley's company at Swalwell," but there is surely a special interest, now that Winlaton Mill has long been a ruin and the Swalwell works have been abandoned for more than twenty years, about this early and, on the whole, successful attempt towards Industrial Peace.

Mr. Turner's sixth point for the operations of the proposed society was the biography of eminent men, natives of, or resident in, these parts; and, as the seventh point, he notes that "Newcastle is peculiarly well situated for procuring Literary Intelligence," because it enjoys more frequent opportunities of communicating with the capitals both of England and Scotland, than any other town in either kingdom, and because of its much trade with other parts of the world.

And this brought the learned speaker to his last point, Navigation and the Mathematics. A century ago, "the solution of various important problems still necessary to the perfection of navigation" had for nearly a hundred years been looked upon as a national object; whilst "the Mathematical Sciences, in their various branches, are capable of almost universal extent and application." Thus he came to his concluding words :—

"I might further remark, with what good ground we might hope to look forward to the pleasure of being favoured, from the most respectable quarter, with various classical illustrations, enquiries into antient manners, customs, etc., etc.; what a favourable prospect we might reasonably entertain of being regaled with specimens of eastern literature, which is daily becoming more and more important in a commercial view, and which appears to be fraught with various beauties, both of sentiment and diction : I might resume a former general argument, and shew the advantages which may arise to our youth in particular, from any institution which may tend to obviate

the many temptations arising from the great degree of leisure which seems, from whatever cause, to attend the trade of this port:—But I am fearful of exhausting the patience of my readers; whom I wish to convince, but not to fatigue."

The reader will have noticed that the idea which was uppermost in Mr. Turner's mind was that of forming a kind of debating society combined with an essay meeting; or it might be better to call it a conversation club, upon an extensive scale. Papers were to be read by the members who had special information to communicate, and were afterwards to be talked over in the freest way.

This was the plan which had been adopted by "the Philosophical and Medical Society" which I described in the last chapter, and which Mr. Turner mentioned at the beginning of his paper. He said, "it appears to be formed upon such liberal principles, as to admit into its body any lovers of general literature who might offer themselves as candidates, though not of the Faculty." He then distinguished between the principal (and really the exclusive) object of that society—the improvement of the practical part of the medical profession, and that of such a society as he wished to form "admitting persons of all professions, parties, and persuasions," and in which "the introduction of practical medicine, as well as, for obvious reasons, of politics and religion," should be forbidden.

The meeting resolved that it was highly expedient that such a society should be formed, and it appointed a committee to draw up a plan, which was to be submitted to the next general meeting.

The men appointed were, in the truest sense, representative. William Cramlington, twice mayor, and half-brother by marriage of Lords Stowell and Eldon; Robert Hopper Williamson, Recorder of Newcastle, and Chancellor of the County

Palatine of Durham; the Rev. Edward Moises, who had succeeded his uncle as head-master of the Royal Grammar School; the Rev. William Turner; Dr. Pemberton, Physician to the Infirmary; Dr. Ramsay, then President of the Philosophical and Medical Society; Dr. Wood, also Physician to the Infirmary; Mr. John Anderson; Mr. John Murray, Visiting Surgeon to the Dispensary; Mr. William Newton; Mr. David Stephenson, architect, who designed and carried out the formation of Mosley Street and Dean Street; Mr. Thomas Gibson; Mr. Robert Doubleday, for forty-six years secretary to the Newcastle Dispensary, secretary also to the Lying-in Hospital and Fever Hospital, one of the founders and a vice-president of the Royal Jubilee School, and one of the founders and directors of the Newcastle Savings Bank. He was one of the original Committee of Management of the Literary and Philosophical Society, acted for some time as joint-secretary with Mr. Turner, and was for twenty-six years an active and highly valued vice-president of the Society, which owed much of its early success to his tact and ability. The remaining members of the Committee were Mr. Malin Sorsbie and Mr. Nicholas Storey, who appear to have been amongst "the few friends" whose social meetings first gave birth to the idea of the Society.

The Committee thus appointed applied itself at once to its task, and presented a plan for the formation and government of a Literary Society to the next general meeting, which was held at the Dispensary in Pilgrim Street, on Thursday, the 7th of February, 1793, the Rev. Edward Moises being in the chair. At this meeting it was resolved—"That this meeting do form itself into a Society by the name of 'The Literary and Philosophical Society of Newcastle-upon-Tyne;'" and rules for nomination of members, election of officers, and reading of papers were adopted, the annual subscription being fixed at one guinea.

The rules provided, amongst other things, that any member might recommend, and any general meeting direct, the purchase of such books, etc., as they thought proper. The subjects of conversation should comprehend "the Mathematics, Natural Philosophy and History, Chemistry, Polite Literature, Antiquities, Civil History, Biography, Questions of General Law and Policy, Commerce, and the Arts." But with practical wisdom, considering the character of the burning questions of that day (and perhaps the implied limitation of the observation is not necessary), "Religion, the practical branches of Law and Physic, British Politics, and indeed all Politics of the day," were "deemed prohibited subjects of conversation."

The ruling idea of the Society's functions was that of a club for talk and argument, both being conducted methodically and with serious objects in view. It was arranged that it should meet once a month, the chair being taken at a quarter before seven in the evening, but the members being "requested to meet at half-past six, to hear such literary intelligence, etc., as any person might have to communicate."

All friends of literature and philosophy, whether members or not, were invited to favour the Society with papers on any of the permitted subjects, or with literary intelligence, curious productions of nature or art, etc., directed to any member of the Society. The reading of papers was to commence at seven o'clock precisely, other business being adjourned until after the discussion of the subject for the night.

These arrangements sound strange and precise now, but we must remember that the gentlemen who prepared the rules were feeling their way. I have pointed out that there were scarcely any learned societies in the land a century ago, but we must also remember that there were no debating societies, no local colleges, no systematic courses of lectures, no quarterly reviews,

no monthly magazines to speak of, no penny daily newspapers. A public gathering at regular intervals for intellectual purposes was quite a new departure for our good town, and required much thought and careful preparation.

This department of the Society, which was the chief one in Mr. Turner's estimation, had developments which are of much interest, and which will be dealt with in a subsequent chapter. But at this first meeting it was also resolved—"That the Society will consider itself as particularly indebted to those who shall favour it with notices concerning coal or lead, with the strata, etc., accompanying them; or with specimens, draughts, plans, sections, borings, etc., illustrative of the natural history of these minerals." The replies to this suggestion, and to that mentioned a little earlier, of forwarding to the Society "curious productions of nature or art," led to the formation of another department altogether—the gathering together of a large and valuable museum. This story will also have a chapter to itself. These two departments have ceased to exist in connection with the Society.

It was further resolved at this first meeting that it should be left to future deliberations to determine what, or whether any, measures should be taken for obtaining the establishment of a General Library. This, which has long been the principal feature of the Society, was not directly contemplated by its founder; but at that first meeting a novel and interesting arrangement was made for the systematic borrowing of books by the members from one another. By this plan members who wished to peruse any particular book were to give notice of the fact in the Society's room, in order that, if any other member were in possession of it, and were disposed to lend it, or could give information where it might be obtained, the person wanting it might be accommodated upon the following terms—viz., "that he give a written receipt for any book furnished by a member, with an engage-

ment to return it within a specified time in as good condition as received."

We have no means of ascertaining how this original method of circulating other people's books answered, but there are persons even in these days who would have fewer agonising gaps upon their library shelves if some benevolent society had volunteered to undertake the task of book-lending for them, and had observed the precaution of obtaining a written receipt for each book lent.

There was no provision made for women members, and, as will be seen hereafter, none were admitted for a considerable time. This was the case with all societies which were known as "learned"; and even to-day, when women have surpassed men in the highest mathematical and classical examinations at the old universities, there are societies claiming the title of "learned" in the metropolis itself which deny to women the title of fellow, and that not from chivalrous motives. But the earliest rules of this Society did make a slender provision for the youth of the male sex, for, "in order to encourage a taste for literature in the younger members of the community," any member was allowed to introduce a young person between the ages of seventeen and twenty-one. It was, however, resolved "that this class of visitors be expected to withdraw immediately after the reading of papers is concluded."

This somewhat mysterious and harsh regulation remained in force for six years, by which time experience had shown that the discussions and conversations indulged in by the older members might be listened to with impunity by such of the ingenuous youth of the district as happened to have a taste that way.

Thus then, at this meeting on the 7th February, 1793, it was resolved that the Society should be formed, and should hold its meetings once a month. At the first of these, which fell on the 7th March, it was reported that seventy-three Ordinary Members

and fifty-four Honorary Members had been already enrolled. The numbers seem to be, relatively, rather disproportionate, but persons who lived more than five miles from Newcastle were eligible as Honorary Members, so that nearly one-half of their number were resident in Northumberland and Durham. Still there were some great names upon the list, names of men of national importance, such as Matthew Boulton, Soho, near Birmingham; Sir Joseph Banks, P.R.S.; Dr. Charles Hutton, Dr. Lettsom,* Dr. Percival, President of the Literary and Philosophical Society of Manchester; Rev. Dr. Priestley, and others.

This meeting was adjourned until the 12th March, when the officers of the Society were elected. The list of these first bearers of office should, I think, be preserved. It runs thus:—

President . . .	JOHN WIDDRINGTON, Esq.
Vice-Presidents. .	STEPHEN PEMBERTON, M.D.
	ROBERT HOPPER WILLIAMSON, Esq.
	JOHN CLARK, M.D., F.R.C.M. Ed.
	WILLIAM CRAMLINGTON, Esq.
Secretaries . . .	REV. WILLIAM TURNER, Jun.
	MR. ROBERT DOUBLEDAY.
Treasurer . . .	MR. THOMAS GIBSON.
Committee . . .	JOHN RAMSAY, M.D.
	MR. WALTER HALL.
	MR. DAVID STEPHENSON.
	JAMES WOOD, M.D.

* The learned and famous Quaker physician whom most men now remember only by the naughty epigram:

"Should any sick to me apply,
I blisters, bleeds, and sweats 'em;
If, after that, they chance to die,
What's that to me?
I. LETTSOM."

The Committee has been increased to twelve members, but the other offices remain as they were first settled. It is amusing to note that the Secretaries precede the Treasurer. More than three-quarters of a century afterwards a serious question arose upon this vital point; and it was settled at last by the Secretaries allowing the Treasurer's name to be printed before their names, but always taking precedence in introducing lecturers and the like. It is on such questions that much valuable time and thought must be bestowed, for they appear to be of the first importance.

With three exceptions, the officers were members of the original committee. With their election the Society may be considered to have begun its actual work. But it was very soon felt that the members required something more than the opportunity of meeting once a month for conversation, and of borrowing books which they were not allowed to appropriate. Scarcely half a year had passed before a forward movement was made in the direction of establishing a General Library. The Rev. Edward Moises led this movement, and at his suggestion a special committee was appointed on 10th December, 1793, to take the matter into consideration, their attention being drawn to the resolutions of the meeting of the 7th February upon the subject. The Committee "held repeated meetings, at each of which they found no difficulty in agreeing that the establishment of a General Library, subject to the restrictions of the eighth Article of the 7th of February, was an object highly desirable," but the best mode of carrying out such establishment gave them much trouble.

The usual plan was to give each subscriber a share in the undertaking, which was a definite item of personal property, and could be sold or bequeathed by will. The objection to this course in the case of a library was that the chief interest might

come, in course of time, to be vested in illiterate persons, infants, or absentees. To prevent this, it was proposed to give the Society a right of pre-emption, but this was considered dangerous, as a few members might combine and, by selling out, "very seriously distress the Society." Several other suggestions were made, but the Committee at length wisely concluded that "it appeared most agreeable to the original principles of the association, as well as the most simple and free from difficulties, that the Library, etc., should always continue to be considered as the undivided property of the General Body for the time being; and that every Member should be understood to receive a sufficient compensation for his subscription, in the information derived from the stated meetings of the Society, and in the use of the books and other property, so long as he continues a Member."

This plan was adopted, and has always been adhered to. At the time it was unique, and Lord Brougham, in a pamphlet on Mechanics' Institutes, instanced it as a case of liberality of treatment which deserved to be celebrated. But the best method of carrying out the resolve of the subscribers was a frequent cause of anxiety. That learned lawyer, Mr. Robert Hopper Williamson, whose fame survives even to this day, advised that an order should be made at the anniversary meeting in 1797 declaring that the property of the Library and other effects of the Society should be vested in the Committee for the time being, in trust for such uses and purposes as should from time to time be directed by the laws of the Society. Each Committee was to deliver to its successors the whole of these effects with an accurate catalogue thereof.

This plan, it is obvious, could only be satisfactory so long as the Society's possessions were few. As they increased, its inadequacy was felt more and more, and at the Anniversary Meeting in 1805 the Committee announced that they had

resolved, "upon the most mature deliberation, and after availing themselves of the best legal advice, to propose a Deed of Trust, renewable from time to time to new Trustees to be appointed by the Society." The heads of the proposed deed having been read, the meeting directed it "to be sent to Charles Butler, Esq., of Lincoln's Inn,—and, having been corrected and approved by him, to be engrossed and signed by the parties concerned."

But although our predecessors were not troubled by "the insolence of office," they could not escape "the law's delays," and no more was heard of the proposed deed for twenty years. There was an abortive attempt made to get a General Act of Parliament passed which should relate to all societies of a similar description, but in 1825 the whole of the Society's property. including its new building, was "vested in the sole name of our most worthy President." And so at long last the matter was submitted to Mr. Butler, "whose eminence as a Conveyancer is universally acknowledged."

Mr. Butler advised as follows:—

"I have perused this case, and the Deeds and Rules and Regulations accompanying it.

In all of these cases, a difficulty arises, from part of the property being real estate, and part of it personal estate. To avoid which, I recommend that all the real estate should be properly vested in the Trustees for a term of 1000 years.

Another difficulty frequently occurs in these cases, from the difficulty of disposing of the property, if the parties should wish to sell or exchange any part of it; or if the institution should fail. To prevent which, there should be a regulation that it shall be lawful for the Members, or a majority of them, to direct the property to be sold; and that in such a case, a resolution for that purpose should be framed and entered in the minutes; and that a recital of the resolution in the conveyance or assignment should be evidence of it, and of its having

been regularly and properly made :—and a declaration that the receipts of the Trustees, for the time being, should discharge the purchasers from seeing to the application of the purchase money; and from all obligation of ascertaining the existence of the resolution, or of its having been duly made.

When it becomes necessary to appoint new Trustees, it should be done at a meeting of the company, but proper Deeds must be executed for vesting the property in the new Trustees, and the continuing Trustees. The resolution for the appointment of the Trustees should contain a provision for this purpose, and a declaration that a recital of this provision in the Deed appointing the new Trustees, shall, in respect to all persons dealing with the Members, be evidence of the existence of the resolution, for its having been duly entered into.

I think the language of the rules requires some alterations, and that some new rules should be framed.

All the Members (except the Trustees) should covenant with the Trustees; and the Trustees should covenant with five or six of the principal Members.

A general description of the property will be sufficient.

I recommend that whenever a new Member is chosen, he should sign and seal the proposed Deed, and that his signature and sealing should be witnessed by a new attestation.

It is never absolutely necessary to insert the character or place of abode of the parties to the Deed, but there should always be such certain mention of them, as will ascertain who they are; this may be set opposite to their names in the schedule.

The Equity of Redemption should be vested in the Trustees.

Lincoln's Inn, *Feb.* 5, 1825." CHARLES BUTLER.

A deed of trust was duly prepared in accordance with this opinion, and was laid upon the table for a month for the edification of members. It was explained by Mr. Brockett to the annual meeting in 1826, and that meeting resolved that it should be laid before Mr. Williamson for his approbation; and

that, if the general principle of it were approved by him, it should be brought with his corrections before the next general monthly meeting, which should be duly authorised to fill up the deed with the proper number of trustees.

Experience teaches, but very slowly, whilst "Hope springs eternal in the human breast." The next general monthly meeting and two anniversary meetings had to pass over before the deed was laid on the table for signature by the members. It was, indeed, dated the 1st day of March, 1828, but it was the 8th day of March, 1829, before the chief parties had signed it and the fact was announced to an annual meeting.

The deed recited, amongst other things, that the Literary and Philosophical Society had by the annual subscriptions of the members purchased a large library of valuable books and an extensive philosophical apparatus, as also a museum of natural and artificial curiosities, with other valuable property necessary and requisite for the use and purposes of the Society, and that the several members had agreed that it should be governed by the several rules or regulations and laws set forth in the first schedule to the deed. The buildings, lands, hereditaments and premises were conveyed, and the books, philosophical apparatus, museum, goods and chattels, personal estate, property, and effects whatsoever were assigned, unto Sir Matthew White Ridley, Cuthbert Ellison, Henry Thomas Liddell, Matthew Bell, Addison John Cresswell Baker, John Adamson, Charles John Bigge, John Trotter Brockett, Charles Bertram, John Bulman, George Burnett the younger, William Henry Brockett, Christopher Cookson, John Clayton, Joseph Croser, Thomas Doubleday, William Gray, Robert Ingham, Robert Ormston the younger, James Smith, and Charles Thorp, in trust for the benefit and advantage of the Literary and Philosophical Society, and to be held, enjoyed, and applied by

the said Society in the manner and for the purposes for which the same was constituted and established, and according to the then present and future rules or regulations and laws, made and to be made for the management of the same, and to be for no other use, intent, or purpose whatsoever.

The deed contained a proviso that no person who then was, or who, at any time thereafter, should become a member, should have or be entitled to a transmissible estate or interest, either legal or equitable, in the real or personal property of the Society, but that, when any person ceased to be a member, all his estate, right, and interest in the premises immediately determined and became void, to all intents and purposes whatsoever.

The signatures of persons becoming members were contained in a second schedule to the deed, and it was usual, until some forty years ago, for every one to sign upon election. That custom is no longer observed.

There has been one new appointment of trustees up to the present time, and that was in 1871. The surviving trustees then were the Right Hon. Lord Ravensworth, A. J. B. Cresswell, Esq., John Clayton, Esq., Robert Ormston, Esq., Matthew Bell, Esq., and Robert Ingham, Esq., all of whom have since passed away. The new trustees were Sir W. G. Armstrong, C.B., Ralph Brown, Esq., Rev. J. C. Bruce, LL.D., Edward Charlton, Esq., M.D., R. C. Clapham, Esq., R. R. Dees, Esq., D. Embleton, Esq., M.D., Thomas Hodgkin, Esq., Thomas Humble, Esq., M.D., R. O. Lamb, Esq., G. H. Philipson, Esq., M.D., Rev. J. Snape, D.D., Sir John Swinburne, Bart., Hugh Taylor, Esq., and Robert Spence Watson, Esq.

I have gone fully into the position of the property belonging to the Society, not only because our constitution has served as a model to many others, and has stood the test of long experience, but because new members have so frequently inquired

about it that it seemed desirable to give all persons interested in the matter the fullest opportunity of knowing the exact facts.

We must now return to the Special Committee of December 10th, 1793, which had resolved that a General Library should be formed, and which had also, after much anxious consideration, arrived at the admirable plan for getting over the difficulties of proprietorship, the full history of which I have just detailed.

By the permission of the authorities, the Society had been allowed from the first to use the Governors' Hall of the Dispensary for their meetings. The Dispensary had removed from the entry below the Queen's Head Inn (now the Liberal Club) in Pilgrim Street to St. John's Lodge in Low Friar Street, the lease of which had been purchased by the Governors from the Incorporated Company of Saddlers. The Literary and Philosophical Society agreed to pay six guineas annually to the Dispensary, and they were allowed to put up a bookcase in the hall, the first bookcase which the Society acquired. It cost the modest sum of five pounds, is described as "handsome," and was "eighteen feet wide, and completely furnished with drawers, shelves, and doors, to the lower part."

But the hall and bookcase would manifestly be unequal to the requirements of a General Library, and the Special Committee was therefore desired to join the Standing Committee in endeavouring to find more suitable accommodation. On the 11th February, 1794, they reported that they had engaged for a year, upon trial, a room in St. Nicholas' Churchyard, which was then used as a billiard-room. Three years later, as the growth of the Society was rapid, they had to take the large room under that already occupied. The old room was used for the meetings of members, whilst the new one, with entrances from Mosley Street and the Churchyard, was the Library proper. The yearly rental of the two rooms was twenty guineas. Rules

were drawn up for the circulation of books, several of which are still in force, and Messrs. Charnley and Bell, who were booksellers and members of the Society, were appointed the first Librarians. The orders for books were to be divided between them as nearly as might be, and for this privilege they undertook to attend in rotation, either personally or by some responsible person, on Tuesday and Thursday of each week, between the hours of twelve and two.

But as the number of members increased, so there grew the demand for an extended and more regular delivery of books; and at the annual meeting in 1798 it was reported that Mr. Robert Spence had been engaged as Librarian at twelve guineas a year, and that he would attend daily from eleven to two o'clock. A new class of honorary members, who were to have the privileges of ordinary members, had been formed in the preceding year but their number was limited to four. This class still continues to afford a valuable means of recognising local merit, often to the great benefit of the Society as well as of the recipient of the distinction.

It is interesting to find, amongst the purchases of the Committee, many things which are unknown to those of the present generation, such as a lanthorn to light the entry, and a pair of snuffers for the use of members: there is nothing, however, so remarkable as the purchase of a lottery ticket, which Dr. Embleton mentions in his admirable account of the Newcastle Medical Society as having been agreed to for the benefit of that Society in 1790.

At the same annual meeting (1798) the Committee explained that they had found it necessary to obtain yet more extensive premises, and that they had agreed to take the Old Assembly Rooms, adjoining Ridley's Court in the Groat Market, at £18 a year. They had also arranged that the

Librarian should attend for two entire afternoons in each week, for the need of extra service developed almost with his appointment, and his salary was raised to £18 per annum.

The Committee rejoiced greatly in the acquisition of the new rooms, and congratulated "their brethren on the pleasant and commodious manner in which they were enabled to hold their Anniversary Meeting, in the spacious and elegant apartment provided for their use, and in which they might hope that the Society had at length arrived at something like a permanent establishment."

They had obtained "an ample Repository for a very extensive collection of books, as well as for a cabinet of fossils." Gifts of interesting and curious objects had, indeed, been made to the Society from the beginning of its career. The first annual report, presented at the Anniversary Meeting of March 1794, mentions, amongst presents of essays, papers, and the like,

> A Section of the Strata in Alstone Moor and Dunston Fell Lead Mines (to the depth of 241½ fathoms), with a large collection of specimens, illustrative of the products of the Lead-Mine district, from Nicholas Walton, jun., Esq.
>
> Various unusual Mineral Productions found in a dyke in Denton Colliery, from Mr W. Thomas.
>
> A collection of Specimens from the Lead-Mines in Swaledale, Yorkshire, from the Rev. Mr. Turner.
>
> Ditto, from the Copper Mine at Parys Mountain, Anglesea, by ditto.
>
> Various curiosities of Nature and Art from the islands in the South Sea, and from China, from Mr. Flower Humble.
>
> A Section of the Strata to the Low Main Coal in St. Anthon's Colliery (depth 135¼ fathoms), with a box containing Specimens of all the Strata methodically arranged, by Mr. George Johnson.

This statement of gifts is of special interest because it marks the beginning of the great collection which, nearly forty years afterwards, was entrusted to the care of the then newly-born Natural History Society, and which now forms part of the treasures contained in that Society's noble museum. How this collection grew, and how it came to pass away from the Literary and Philosophical Society, I shall treat of fully in a subsequent chapter. For the present the new home in the Groat Market sufficed for the wants of the institution.

That home seems to have had a spacious and adaptive character. There was to be found in it "suitable accommodations" both for general meetings and for daily resort to the Library; but there was also "power, in cases of necessity, to accommodate Lecturers on such useful subjects as the Society might think fit to patronise"! What came of this, and the whole of the curious and interesting history of lectures in connection with the Society, will be fully gone into hereafter.

The cost of repairs to the rooms, fitting up bookcases, making alterations, and the like, was heavy, and from the first there were subscribers whose habit it was to get into arrear in the payment of their subscriptions. Their irregularities caused the purchase of books at one time to be entirely suspended for a considerable period. And now, with the new premises, ladies began to express the desire to join the Society, and it was considered that, if this were permitted, some mode of election must be found "less revolting to their delicacy than the usual nomination." And so a new class of members was formed, and they were called Reading Members, but they could neither attend General Meetings nor vote in the choice of members, To this class ladies were declared to be eligible, "the Society waiving, in their case, the month's previous proposal" required of men.

So far as I have been able to ascertain, ours was the first English Society which opened its doors to women. There does not seem to have been any burning anxiety about admission upon their part, for in 1801 there was but a single lady Reading Member, but they soon seem to have successfully asserted their equal rights, for in 1804 two ladies actually appear amongst the newly-elected Ordinary Members. How dangerous it always is to let in the thin end of the wedge! Yet, as a matter of fact, ladies did not begin regularly to join the Society, as a matter of course and in the ordinary way, until after the reduction of the annual subscription in 1856, consequent upon the payment off of the Society's mortgage debt, chiefly through the generosity of Robert Stephenson, and they joined then without note or comment, as a matter of course.

No vigorous and healthy body remains long out of difficulty. Difficulties are the salt of life, and alone make it truly worth living. The new Library made an excellent Lecture Room, but when it began to be used regularly for the purpose of lecturing, the readers not unnaturally, began to rebel. As early as 1803 the question of separate apartments for these purposes was raised, and a model of a proposed Lecture Room was prepared and exhibited. But it was not to be. The joint-occupation continued until 1809, and then the lectures were removed from the Old Assembly Rooms in the Groat Market to the Concert Hall attached to the Turk's Head in the Bigg Market.

By that time "the spacious and elegant apartments," which had seemed at first sufficient not for that day only but for all days to come, began to appear somewhat small and cramped, and by 1813 they had proved so entirely inadequate longer to afford any tolerable accommodation for the Society's increasing Library and other valuable property, that the question of how to obtain new and fitting premises began to be entertained. The pro-

prietor of the Old Assembly Rooms had given notice that he intended to dispose of the property of which they formed a part, and therefore the possibility of continued tenure upon the part of the Society became problematical. Many sites upon which an appropriate building could be erected were discussed, but at the Annual Meeting in 1815 the Committee recommended the members to confirm a treaty which they had negotiated with the Corporation for a lease of ground immediately north of the Girls' Jubilee School, and adjoining the new street from Pilgrim Street to the new bridge,—the place now occupied by the Lying-in Hospital. This site they looked upon as more central than Charlotte Square or the Cross House. As for the funds which would be required for the erection of the building, it was presumed "that many opulent and spirited individuals, disposed to encourage the interests of literature and science, would afford some extraordinary assistance in the form of donations." It was, at the same time, proposed to raise the annual subscription to one and a half guineas for four years, which scarcely, perhaps, deserves the name of an heroic measure.

The next report shows that little actual progress had been made in the twelve months which had elapsed. The sum of £261 19s. 6d. had been obtained from the increase of subscriptions; £257 had been subscribed by way of life-interests in the use of the Society's property; and the donations of "opulent and spirited individuals" amounted to £513 7s. The disappointment was attributed to "the severe pressure of the times. The difficulties, however, arising from this cause, it was to be hoped that the continuance of peace, and their increasing finances, might in time overcome." It was then not a year since Waterloo had been won.

But, in the meantime, whilst the property of the Society was receiving much injury from the cramped space into which it was

THE FORTH, 1840.

necessary to crowd it, the unfortunate Committee were repeatedly in the receipt of vexatious notices, apparently from the proprietor of the rooms, who was not unnaturally somewhat impatient at the long delay in giving them up, and who wished to offer them for public sale.

We have, however, gained greatly by that delay, for no more central site than that ultimately fixed upon could possibly have been obtained, when the necessities of the two towns of Newcastle and Gateshead are considered. The Cross House site, now occupied by livery stables and offices, and extending from Westgate Street to Fenkle Street in breadth, and from Westgate Street to Clayton Street in length, might have been purchased in 1815 for £840. That sum was considered to be so large that the Committee saw no prospect of effecting its purchase, and afterwards completing the requisite buildings, by any funds which it was probable that they could raise. So the concert-room attached to the Turk's Head was considered. It was entered through a public inn yard; was too small; and "it would have been scarcely consistent with the liberal principles on which the Society would choose to act to induce the proprietor to detach it from its present connection with the Turk's Head; or to deprive the town of almost the only room which it is possible to engage for various public purposes."

The next place thought about was the Circus, near that fine old pleasure-ground, the Forth, which has had so recently as 1846 to make way for the Central Railway Station and its surroundings—Newcastle losing thereby one of the most charming of mediæval pleasure-grounds. The Government had been using the Circus as a tobacco warehouse, and it was a great shell of a building which could be made to do all that was necessary. But the consequent alterations would cost almost as much as "an original building," a considerable annual rent would be asked,

and in those days, the town being much more compact than it is in ours, the Circus was thought to be "at so great a distance from a very large majority of the members," that the situation formed an insuperable objection.

How curiously the existence of streets and houses changes ideas of distance. The Central Station is scarcely nowadays looked upon as too far away for a walk from Northumberland Street, or even from the Barras Bridge, but these were outlying districts of Newcastle at the time of which I write. Miles of what was then beautiful country have, in every direction, been swallowed up by the ugly town, and we think little of walking distances every day which our forefathers looked upon as something of journeys.

Then a field outside the Walls, opposite to the Baths, vacant ground opposite Charlotte Square, a site on the Castle Mount in the immediate vicinity of the New Courts and the Castle, another at the foot of Westgate Road, and a combination of the building for the Society with an intended new Corn Exchange, were successively taken into consideration. I have already explained that the Committee advised the annual meeting in 1815 to confirm their treaty with the Corporation for the New Bridge Street site. This was not done. On the contrary, at a special meeting held on May 2nd of that year the members rejected this site, but instructed the Committee to purchase a freehold piece of ground adjoining it, or any other that might be found commodious, if it could be obtained for a sum not exceeding £1000; and they sanctioned the election of a hundred life members, who were each to pay twenty-one pounds.

But the Committee, failing to find such a site, called another special meeting for the 22nd September following, and it was then resolved to accept the land granted by the Corporation, and to build upon it so soon as the funds of the Society would

admit of it. The Town Clerk had already prepared a lease of the site at the annual rent of £2, and the first half-year's rent had been paid, and rent continued to be paid up to Michaelmas, 1821. The Corporation had certainly acted handsomely towards the Society in granting it so much land at a nominal rental. It is interesting to note that the site in question is almost opposite to that now occupied in the same street by the Public Library. The Committee were, at the same meeting, desired to consider and report upon the propriety of a private Act of Parliament being obtained to enable the Society to raise money for a suitable building, and to give it power to regulate its proceedings.

I have already shown how slowly the requisite funds came to hand, but the necessity for quitting the Old Assembly Rooms seems (with the advent of a new proprietor) to have diminished, for attempts were made to alter them so as to obtain more book-space and greater comfort for the members, and the reading-room was divided from the assembly-room by a permanent screen. In January 1818, amidst the cheers of a great crowd, some of the shops in Mosley Street and elsewhere were for the first time lighted with gas, and, by the middle of that year, the Society abandoned oil-lamps and candles in favour of the new illuminant. The introduction of the gas-light was looked upon as, and undoubtedly was, a great improvement, and it was expected to be "a considerable saving in the article of expense," which is not quite so certain at its then cost. From 1817 to 1821, the Reports say little about the question of new premises, but the building fund was, all the time, steadily increasing.

But on November 6th of the last year, a special meeting was held "for the express purpose of taking into consideration the question of a proper site for the new building;" and at this meeting it was finally resolved to surrender the Corporation

lease with grateful thanks, and to take over a site in Westgate Street which had been purchased for the purpose by Dr. Headlam and certain gentlemen associated with him. The names of these gentlemen were inserted in the Annual Report of 1822, "that posterity may have the opportunity of knowing to whom the Society was obliged for this public-spirited measure." I am therefore in honour bound to record them here. They were: "Isaac Cookson, Esq., C. W. Bigge, Esq., James Losh, Esq., R. W. Brandling, Esq., Isaac Cookson, jun., Esq., Thomas H. Bigge, Esq., Thos. Cookson, Esq., Thomas Fenwick, Esq., Sir R. S. Hawks, Rev. Anthony Hedley, Dr. Ramsay, William Boyd, Esq., Thomas Davidson, Esq., John Davidson, Esq., Armorer Donkin, Esq., Joseph Bainbridge, Esq., J. T. Brockett, Esq., John Adamson, Esq., William Fife, Esq., William Moore, Esq., Mr. Charnley, Mr. Henry Marshall, William Thomas, Esq., Dixon Brown, Esq., Dr. Headlam, Rev. I. Headlam."

In those more formal days, it must have been no small burden upon the Secretaries of the Society properly to apportion the Misters and Esquires amongst subscribers and committee-men.

This is the first time that I have mentioned Dr. Headlam's name in connection with the Society, but he had been a member of it since 1803. Already he was zealous of good works, and so he continued through a long and honoured life. This century has seen no citizen more universally and justly respected and beloved. That "good gray head which all men knew," that kindly voice, that keen glance, and that bent but distinguished figure, are delightful memories. His life was devoted to the highest interests of science and humanity, and to this city he was of infinite and unwearying service. When he died in 1865 he had been a member of our Society for sixty-two years; he had served it first as a Committee-man, and then as a Vice-

President, and from 1850 to 1855 he was its energetic and honoured President.

The site of the proposed building cost a thousand pounds, and the building itself was on no account to cost more than four thousand pounds. So said the circular which the Secretaries speedily laid before the more opulent members of the Society, and other gentlemen connected with the town and district. It also represented that "the fund already on hand might be stated at £2200, and it was proposed to leave a mortgage on the premises of at least £1000, as it seemed reasonable that posterity should pay in rent as much as the founders had paid for very inferior accommodations, besides accumulating so large a store of valuable property."

And now, at the end of thirty years, "the few who survived of the founders of the Society gave up their trust with mingled feelings of serious recollection and encouraging hope." A generation had passed, but the Society still flourished. A very extensive and valuable library, a considerable apparatus of philosophical instruments, and several curious specimens of natural history had been accumulated; and now a site for a permanent home had been obtained, and twelve sets of plans for a suitable building lay on the table. The manner of ultimately selecting an architect was left to the decision of that annual meeting of 1822.

And that meeting appointed a Building Committee, which should consist of Isaac Cookson, Esq., Charles William Bigge, Esq., James Losh, Esq., Dr. Headlam, and the treasurer, William Boyd, Esq., and four members to be chosen out of and by the Committee elected that night. This building committee was to fix upon a plan, but subject to the sanction of a general meeting; to choose an architect, to make contracts, and to transact all business which was necessary for the due execution of the work:

but they were not to spend more than £4000, including the sum obtained for the old materials of the houses to be pulled down.

What they did spend, and how, as well as the subsequent history of the Society's buildings, will be found in the following chapters.

CHAPTER IV.

THE BUILDING OF THE HOUSE.

WE have now followed the wanderings of the Society since its birth in the New Assembly Rooms, and its infancy in the Old Dispensary in Low Friar Street, to St. Nicholas Church-yard, where it was not buried, but whence it escaped to the Old Assembly Rooms in the Groat Market, and it has at last got possession of a site of ground of its own, part of the gardens and outhouses of Bolbeck Hall, the seat of the Earls of Westmoreland, and called also Westmoreland Place. The house itself, Westmoreland House, was standing until a few years ago, a charming old English mansion, but was pulled down to make way for the Mining Institute. Upon this site it was resolved, in 1822, to erect the permanent home of the Literary and Philosophical Society, at a cost which was, on no account, to exceed £4000.

The Building Committee appointed Mr. John Green the architect of the undertaking, and his plans were laid before the members, and were formally approved of in April 1822. Mr Green did not let the grass grow under his feet: his contracts were soon ready, and that for masonry was let to Mr. John Ions of Gateshead, whilst the joiners' and carpenters' work fell to Mr. C. Burnup of the Barras Bridge, at that time a bridge in

fact. No time was lost in commencing operations, and, so soon as the 2nd of September, the foundation-stone of the new building was laid by no less a person than the Duke of Sussex, and with appropriate ceremonial.

Then, as now, the approaching advent of royalty stirred the society of the town and district to its depths, and aroused an interesting amount of excitement amongst the inhabitants generally. There was to be high holiday, and there were circumstances connected with the person of the visitor which lent themselves to special pomp and ceremony. The Royal Duke was the Most Worshipful Grand Master of the Ancient Freemasons of England, and the Provincial Grand Lodges of Northumberland and Durham, and the warranted Lodges of Craft Masonry then existing in the District, resolved to receive their Royal Brother with fitting honours. Fraternal circulars flew hither and thither. Banquets were contemplated, a Grand Masonic Festival was arranged. An elaborate order of procession was prepared and promulgated; full directions as to signals by blast of trumpet, as to different tickets of admission to the various functions or the different rendezvous, and as to the dress to be worn, were given; the Brethren were all to be in black (Regimentals excepted), with regulation aprons and white gloves. Upon the great day, the Provincial Grand Lodge was to assume the high character of the Supreme Grand Lodge of England.

But other bodies were also taking steps of a careful and weighty nature to ensure the due reception of so distinguished a visitor. The Mayor, Sheriff, and other members of the Corporation were unremitting in their exertions: platforms were erected; a throne was prepared; and songs were written. The poetry might be of a somewhat dubious character, but the sentiment was loyalty itself, trig loyalty. It is possible that the

precise and detailed character of the compliments with which each verse was filled somewhat puzzled even the royal recipient, for, with all his princely virtues, the Duke of Sussex could scarcely be truthfully said to "range in wisdom's sphere," and he was not supposed by the uninitiated to "diffuse learning bright around." It was, no doubt, simple and natural enough to hail the principal performer on such an august occasion as "Royal Star," and, from his portrait, it is clear that, as a star, he was of the first magnitude. But I must quote in its entirety the opening verse of this song, "dedicated (by Permission) to the Right Worshipful Aubone Surtees, Esq., Mayor":—

"The beauteous orb of light had rose,
And spread the curtain of the sky,
When science woke from soft repose
To friendship, love, and masonry!
Ye kindred powers! united shine,
To ages yet unborn be shown:—
Great Sussex now has crossed the Tyne,
And laid the temple's corner-stone."

It was little wonder that the great event made a durdum in our good old town. The presence, even the anticipated presence, of royalty has a curiously exciting and upsetting effect upon people who are usually calm, quiet, and sensible. And then we English folk are such rigid formalists. In a town which is a county in itself, and which rejoices in a Sheriff as well as a Mayor, it is evident that somewhat unusually difficult questions of precedence and ceremonial must arise. Nowadays, of course, they have been systematised for a long time, like everything else. Our high civic dignitaries are no longer "in a parlous state," for, unlike the Shepherd of our favourite drama, they have "been to Court," and Mayors, Sheriffs, and even

Town Clerks, wear, upon great occasions, cocked hats, and knee-breeches, and silk stockings, and swords, and other marvellous items of costume "fearfully and wonderfully made." "How we apples do swim." Remembering recent incidents of civic dignity, and reading between the lines, I gather from the detailed accounts of the preparations and their ultimate carrying out, that there had been certain points of difficulty to arrange between the Mayor and Sheriff, but that all these had that ended in a judicious compromise which gave to each that which was his due.

The Royal Duke was the guest of the famous John George Lambton, who then represented the county of Durham in Parliament, and who was the idol of the Durham people; and that not without cause, for not only was he the son of the great and good man, William Henry Lambton, one of the most advanced of the reformers of the eighteenth century, chairman of the Society of the Friends of the People, and earnest in his bitter antagonism to negro slavery, but John George Lambton had himself carried forward the principles which he had inherited. He brought forward a Reform Bill in 1819 of so advanced a character that several of its provisions have only become law during the past quarter of a century, and some are still to be carried. This is not the place for his biography, although, strange to say, it has not yet appeared. That it should not have done so is a national loss, for there is none other man who has done comparable service to the nation of whom so little is yet known. There must surely be abundant stores of the necessary material in the archives of Lambton Castle and Howick Hall. John George Lambton is the man who, when he had (alas the day) become the first Earl of Durham, saved Canada to England, and established our colonial system. He returned home to receive coolness from his friends and cruel and wicked

JOHN GEORGE LAMBTON, M.P.

AFTERWARDS THE FIRST EARL OF DURHAM.

calumny and contempt from his political foes, and died a disappointed man; but all men nowadays unite in acknowledging that in him we had one of our greatest Northerners, and our country one of the noblest of her sons.

The Royal Duke, as I have said, was the guest of the county member who was popularly known as "Radical Jack," and on the morning of the 2nd September, 1822, he and his party drove over to Gateshead in the Lambton carriages. But when the cortège approached the town, the horses were taken out by the enthusiastic crowd, and the Duke and the party were dragged by "prodigious multitudes" of the delighted inhabitants down High Street and the Bottle Bank to the Tyne Bridge. For the Royal Duke it must have been the most thrilling moment of his life when he made the descent of the narrow, winding, and precipitous bank, at erratic and break-neck speed. The people waiting upon the bridge must have shared the thrill. "An immense mass of people was seen pouring down from the streets of Gateshead to the Bridge; the street seemed literally choaked, and in the centre of the mass appeared the carriage of Mr. Lambton, borne as it were along upon the shoulders of the people."

Upon the Bridge a vast multitude awaited the coming crowd. The "spirited Sheriff," Alfred Hall, Esq., had issued a notice to his friends that it was his intention to meet "His Royal Highness" at the Borough boundary, and he reached that boundary, in this instance the famous blue-stone on the Bridge, in much state, a procession having been formed at the Exchange, and proceeding to its position with the band of the South Tyne Hussars leading the way. When the carriage containing the Royal Duke arrived at Newcastle, a royal salute was fired from the guns on the Castle, the bells of St. Nicholas pealed forth, and the hosts of people gathered everywhere, in

the streets, at the windows, even "at the chimney-tops," made so universal a shout,

"that old Tyne trembled underneath his banks."

But the constables had to make a free and hearty use of their staves before the spirited Sheriff and the members for the Borough, Sir Matthew White Ridley and Mr. Cuthbert Ellison, could make their way to the Royal guest. When they did at length arrive, the Sheriff tendered a brief but appropriate welcome in the name of "the ancient and very loyal town of Newcastle," and this was duly acknowledged. But when he turned to follow the band which was to march at the head of the procession into the town, the carriage containing Royalty could not follow the Sheriff. The Newcastle men thought that the pull should now become theirs, but the Gateshead men had got their hands well in and would not give up the ropes, and there was a fair and friendly contest between the parties. It ended in a compromise, the Newcastle men succeeding in getting two more ropes fixed to the carriage, and away it went at a great speed along the crowded Close, and drew up at "the door of the Mansion House amidst the enthusiastic cheers of an immense crowd of people." As it were by a miracle, no one was injured, and the carriage had only suffered to the extent of a broken pole and splinter-bar.

"In the Drawing Room his Royal Highness was received by such an assemblage of beauty and fashion as is seldom witnessed. When his Royal Highness had taken his place, the Corporation advanced," and presented him with an address, which was read by the Recorder, Mr. R. Hopper Williamson, "in a very energetic manner." The Corporation next presented the Duke with the freedom of the town. After he had made a somewhat incoherent reply, the presenting began again. "Major Thompson was

introduced, and had the honour of presenting a statement of the present garrison of Newcastle, and of regretting its inability to provide his Royal Highness with a guard of honour." Whence this inability proceeded does not appear.

Then the company proceeded to the dining-room, where they partook of a *dejeuner à la fourchette*, the ladies being present until the speech-making began. A bumper was drunk to the health of the Royal visitor, and was duly acknowledged in a "neat speech." The King was toasted, and the Duke gave the Corporation of Newcastle, to which the Mayor responded. The Mayor was Aubone Surtees, a member of a good old Newcastle family, and nephew to Lady Eldon, whose romantic marriage with John Scott has already been mentioned. After this toasting was over, the Royal Grand Master "caused himself to be equipped with all his masonic badges," and stood on the steps of the Mansion House whilst a thousand brethren passed in procession before him, bearing all the insignia of the fraternity, banners, silver cups containing corn, wine, and oil, silver trowel and setting mallet, golden square, level, and plumb rule, the Book of Constitutions on a cushion, the Great Seal, the Sacred Law on a crimson velvet cushion, and so forth.

When the rear of this "splendid and striking" procession reached the Mansion House, Mr. Lambton's carriage and six, with seven outriders, drew up to the steps, and the Duke of Sussex, Mr. Lambton, Sir M. W. Ridley, and the Mayor took their places in it, and the great cavalcade proceeded to Westgate Street. There "a most numerous and respectable company" had assembled, and had whiled away the time of waiting in expectation by examining the vase containing the records to be for ever deposited, and the brass plate bearing the inscription for the foundation-stone.

And they had not been badly employed. The vase was

presented by Mr. Price, the proprietor of the Durham and British Sheet Glass Works at Gateshead, and was designed "to afford to posterity a specimen of the height to which the arts of glass-making and cutting had arrived." It is rather difficult to see how this admirable intention is to be fulfilled, as the vase was carefully embedded in the solid masonry of the building, and will, it is to be feared, be somewhat imperfect when the New Zealander inspects its ruins. But it is interesting to learn how long Gateshead has shone in that department of industry, which has, in our own day, attained there its highest artistic development, so far as this country, at all events, is concerned. The one regret is that this loveliest of plastic materials should be so perishable.

The vase in question was "an exquisitely-wrought glass vessel, thirteen inches long and three inches in diameter, and was richly cut with pointed diamonds and strawberry diamonds, rings, and twist." In those days the costly folly of cutting a material, which lends itself to moulding as none other does, had not been exposed. In the vase were deposited all the coins of George III.'s reign, the last report of the Society, a list of the members, and plans and elevations of the intended building. The brass plate was enclosed within strong plates of glass cemented together, and secured with a strong black oak frame. Upon one side it was inscribed thus :—

"This Foundation Stone of a new building to be erected for the use of the Literary and Philosophical Society of Newcastle-upon-Tyne, was laid on the second day of September, 1822, by His Royal Highness Prince Augustus Frederick, Duke of Sussex and Earl of Inverness, in Great Britain, Baron of Arklow, in Ireland, Knight of the Most Noble Order of the Garter, President of the Society of Arts, Colonel of the Royal Artillery Company, etc., etc., and Most Worshipful Grand Master

SIR J. E. SWINBURNE, BART., F.R.S., F.S.A.

of the United Grand Lodge of Ancient Free Masons of England; assisted by Sir J. E. Swinburne, Bart., F.R.S. and F.S.A., Provincial Grand Master of Northumberland, and President of the Literary and Philosophical Society; and by J. G. Lambton, Esq., M.P., Provincial Grand Master of Durham."

Upon the other side the foundation-stone was inscribed thus:—

Officers of the Society.

President.

Sir J. E. SWINBURNE, Bart., F.R.S. and F.S.A.

Vice-Presidents.

CHAS. W. BIGGE, Esq.	ISAAC COOKSON, Esq.
JAMES LOSH, Esq.	ROBT. DOUBLEDAY, Esq.

Treasurer.

WILLIAM BOYD, Esq.

Committee.

Mr. J. T. BROCKETT, F.S.A.	Mr. N. J. WINCH, F.L.S.
Mr. T. HODGSON.	Mr. H. ATKINSON.
Mr. J. MURRAY.	Mr. WM. FALLA.
Mr. WM. ARMSTRONG.	Rev. J. COLLINSON, M.A.
Mr. E. CHARNLEY.	Mr. T. DOUBLEDAY.
Mr. G. BURNETT.	Mr. H. EDMONDSTON.

Building Committee.

C. W. BIGGE, Esq.	Mr. J. T. BROCKETT.
JAMES LOSH, Esq.	Mr. T. HODGSON.
ISAAC COOKSON, Esq.	Mr. W. ARMSTRONG.
T. E. HEADLAM, M.D.	
WM. BOYD, Esq.	Mr. G. BURNETT.

Architect—JOHN GREEN.

The procession began to draw near to the site for the building about two o'clock in the afternoon. The pressure of the

dense crowd was so severe that it was difficult to make progress Our forefathers do not seem to have quite understood the art of keeping great numbers of people in good order. It is amusing to learn that, before the Duke could be driven up to the entrance of the place prepared for the ceremony, there were several "most active scuffles between the constables and the crowd." The poor constables! They can scarcely have entered fully into the enjoyment of the day, for even the delight of freely indulging in the agreeable pastime of cudgelling your fellow-citizens with the impunity of authority must pall with too constant repetition. And then, at last, the crowd fairly got the upper hand. When the brethren reached the stand, they "entered in great confusion, it being impossible to preserve anything like order from the pressure of the crowd, whose attacks were at length found irresistible, for in spite of the efforts of the constables and the hearty blows dealt by them, the outer barriers were fairly borne down, and an indiscriminate entry ensued. The area became in consequence so crowded as only to allow sufficient room for the ceremony."

But whatever temporary annoyance might be occasioned by the disorder, the "grand and imposing" ceremony was duly performed; the stone well and truly laid; three short speeches were made; and, whilst the brethren left the ground with difficulty, the Duke inspected the plans of the building. Then "the Committee, on his Royal Highness rising, formed around him in order to preserve him from the pressure of the crowd, a service which was not performed without much exertion. After a severe struggle," the carriage was at length safely reached, and the Turk's Head Inn was the next place to be visited, where a Lodge was held at once, and closed soon after four o'clock.

"From labour to refreshment" is the favourite motto of the ancient and worthy craft, and no great ceremony can be con-

sidered complete without "victuals and drink." There was yet to be a banquet, and the Duke had requested that it should be open to any gentleman who might wish to attend it. It was to be given in the Assembly Rooms, and there the Royal guest was at length allowed to rest in a room which had been specially prepared for him. But the rest was rather short, for dinner was served shortly after five o'clock, a "most sumptuous" dinner, consisting of turtle, venison, grouse, and every other delicacy in season.

But the tale of the viands moves us less than the curious details respecting the Chairmen and the speeches. In both of these points it was indisputably "most sumptuous," and I must go somewhat minutely into the account of them, even at the risk of being more tedious than usual. For, in these degenerate days, we dine late, eat little, and drink less; speeches after dinner have a blessed tendency to grow shorter, and that time-honoured abomination, the formal toast list, promises, at no distant date, entirely to disappear.

Far otherwise was it seventy years ago, as the sequel will abundantly prove. Upon this occasion the chair was, in the first instance, taken by the senior member for the borough, the second Sir Matthew White Ridley, who, when (in the good old fashion) the cloth was removed, gave "The King," a toast which was received with three times three, "God save the King," and a salute fired by the guns on the Castle. Next came "The Royal Family," "The Duke of York and the Army" (Tune, "The Duke of York's March"), "The Duke of Clarence and the Navy" (Tune, "Hearts of Oak"). But words nearly failed the good Chairman when he came to the next toast: "He felt it was not in the power of language to express the respect with which they wished to receive His Royal Highness the Duke of Sussex that day. But he did not think that silence would be

altogether proper on the present occasion," and so the toast was given, and "drunk with most rapturous applause, and was also marked by a royal salute from the guns on the Castle." After the amount of firing done that day, the fact that the old Castle continued to stand its ground is an excellent tribute to the building qualities of our Norman conquerors.

The response which the Duke of Sussex made to this drinking of his own health has a certain interest which is all its own. Omitting what I may call the purely complimentary part of his speech, he said: "My Hon. Friend with great propriety introduced my name as connected with the House of Brunswick, that family which had been called to the throne of these Realms, that came over to this country under a solemn compact of civil and religious liberty; a principle I have always laid down for the guidance of my public conduct,—a principle which I am sure is congenial with the feelings of every member of the Royal Family."

The good man had got this hazy notion upon the brain and it came out upon every occasion with parrot-like iteration. Compare with the above extract from his after-dinner speech the following gem from his preprandial exhortation to "Mr. Mayor, Recorder, Aldermen, Sheriff, and Common Council of Newcastle-upon-Tyne" at the Mansion House. He then said: "I perfectly agree with you, Gentlemen, that it was upon the principles of civil and religious liberty that that branch of the Royal Family to which I belong was called to preside over these realms. It is, therefore, with great sincerity and pleasure that I can assure you, that as I always have, so I ever shall regulate my public conduct in conformity with such conviction."

Both speeches, or both editions of the speech, are a little hazy, and perhaps slightly inaccurate—historically at all events —but on the second occasion the Duke was evidently resolved

that he would not disturb the harmony of the evening, for he went on to say: "In a company like this, I am aware it would be extremely improper to go beyond certain lengths" (commoners, at all events, would say in any company, nowadays), "but there are sentiments which must be congenial to the feelings of every one, and I should be extremely sorry if anything should occur to disturb the harmony or shock the good sense of this company." (The reader involuntarily asks, "Whatever astounding thing is he going to do or say?" But the speech at this point recalls Captain Cuttle's declamation, or the speeches of certain local celebrities: it becomes incoherent and spasmodic.) "All I say is that I am proud of being a member of the Royal Family, denominated the House of Brunswick. I say denominated, because it is to this country that we are indebted for the title and rank in society of being so. I am, therefore, not unlikely to be a friend and supporter of English Royalty; but I do not like Foreign Royalty. I like the English Constitution. I like the principle that the King can do no wrong; but I do not wish the evasion of responsibility. I respect and love the aristocracy of the country, as a link between the Sovereign and the People; but I do not like oligarchy. I am an admirer and supporter of the Rights of the People; but it is not my interest, and I am not paid for being a Republican." (A right royal idea, to be sure: it is a mere money question, after all: he "did not get the fees.") "Such, gentlemen, are briefly my principles, and I thought it but fair, as you have done me the honour of electing me a citizen of Newcastle, that you should know a little of my principles." Truly, a precious little!

After this brilliant effort, the Duke proposed "The health of the President and Members of the Literary and Philosophical Society of Newcastle," to which Mr. Bigge responded. Sir C.

M. Monck—the first Middleton who took the name of Monck, a great lover of Greece, whose cause he warmly supported, and whose architecture he endeavoured to adapt, at Belsay, to English domestic requirements—followed with "The health of His Royal Highness the Grand Master of England, and the Free Masons of England, particularly those who had assisted in the proceedings of that day." The Grand Master made another speech, and then proposed "The Chairman," who found the difficulty of speaking, which he had mentioned at an earlier period of the entertainment, increased, but he spoke nevertheless, and he concluded by giving "The health of the new Free Burgess of Newcastle, his Royal Highness the Duke of Sussex," and upon this the band struck up the remarkably appropriate tune, "May we ne'er want a friend or a bottle to give him." The Duke was equal to the occasion, and "felt it his duty to give 'The Mayor and Corporation.'" In reply the Mayor made "an animated speech," and sat down, amidst reiterated cheers, "lamenting that it was not in his power to express his feelings more strongly." It was a rather dubious compliment to cheer that statement, unless it was felt that he had succeeded in going quite far enough. The appreciative band struck up, with a slight suspicion of sarcasm, "What will the people say?"

The next health was that of Mr. J. G. Lambton, proposed by the chairman, and responded to by the good Radical in a long speech about the virtues of the Royal Family in general, and of this special member of it in particular, and he "sat down amid rapturous applause." It is difficult now to read the fulsome periods of the great and advanced Radical orator of that day without thankfully recognising that in the interval the feeling about royalty has grown less slavish, amongst sensible people at all events, although at least equal respect is paid where respect is due.

And now the toasting left the Duke of Sussex alone for a little, although he took his part manfully in the more general work. The chairman proposed "The Lord-Lieutenant of the County," and his Royal Highness gave "The Fair Sex of the town of Newcastle-upon-Tyne," concluding by a facetious remark which caused great merriment throughout the room, but which it was apparently considered safer not to reproduce in print. After this diversion, Mr. Mayor toasted "The Members for the Town," and Sir M. W. Ridley, in reply, made his ninth speech. Mr. Ellison, who had been Sir Matthew's colleague for fourteen years, and who was father to the late Lady Northbourne, also responded to the toast, and then the chairman seems to have got his second wind. He gave in rapid succession, "Prosperity to both sides of the Tyne," upon which our local "national anthem," "The Keel Row," was played; "The health of Dr. Charles Hutton," the eminent mathematician, and a native of the town, who only lived into January of the following year; and then, returning once more to his first love, "The health of the Duke of Sussex as President of the Society of Arts and Manufactures," which he recommended "should be drunk with three times three, or nine times nine, in their hearts"—a truly difficult feat to perform!

Up to this time the toasts had, with one exception, but little reference to the men who had really worked at the Society, and but for whose wise and devoted labours the very gathering itself would not have been. This is, as a rule, the case at all great meetings of a similar kind. Those who have given their lives to the work, patiently, ungrudgingly, and zealously, and who know every detail of it thoroughly, have the pleasure and satisfaction of seeing the men who have got bigger names, and who have the inestimable advantage of complete ignorance of the matter in hand—who, like other figure-heads, are of small use

and of uncertain ornamentation,—calmly and dignifiedly enter into their labours, and appropriate the merit of them with the air of those who confer favours upon society in general, and upon them in particular.

But now, when eighteen toasts had been drunk and twenty-seven speeches made, and the gentleman who had spent a few hours in the Society's service had been toasted five separate times, Mr. Ellison "rose to propose the health of a gentleman whose character endeared him to all who had the pleasure of his acquaintance, and whose name was associated with those of the founders of the Literary and Philosophical Society, of which he might be called both the Father and God-Father,—the Rev. William Turner."

The reply was characteristic: worthy of the man, and more than worthy of the occasion. There was no grovelling at the feet of royalty, no simulated paralysis of the vocal chords, about the good, honest Unitarian minister. Simply acknowledging that the first idea of the Society had been his, and accepting the honourable connection of his name with it, he pledged himself to further exertions for its success. But he scorned, as all men should scorn, to appropriate to himself praise which was properly another's. "He could claim for himself very little merit as to that important feature of its plan which had called for the erection of the building of which their Royal visitor had that day laid the foundation-stone. The object of the paper which had the good fortune to give birth to this Society contemplated chiefly conversation and the reading of literary essays; the accumulation of books and the collection of a museum were treated in it as distant, though desirable, objects." He then went on to explain who was the author of the library scheme, "a reverend and learned associate in the establishment of the Society," no longer "among the number

of its active supporters." "But it would be unjust to forget the real author of a great benefit received; if therefore he might be permitted for once to break the order of toasts to be given from the Chair, he would feel gratified in being allowed to propose "The Rev. Edward Moises, the Father of the Library," which was accordingly drunk, but apparently without applause. Probably the breaking of the formal toast list was felt to be a dangerous innovation.

The Rev. Edward Moises left the Society in 1809, because he did not approve of the course which was taken with reference to the lectures given by Mr. Turner in connection with the institution. I shall have to treat of this matter more fully in a subsequent chapter. Other men of mark dropped away for very different reasons. The Recorder, Mr. Hopper Williamson, who was one of the first Vice-Presidents, withdrew from it at a very early date, because, alarmed by the atrocities of the French revolutionary leaders, and recognising how largely the idea of our Society was generated from the growth of such bodies in France, he dreaded (and not without reason) the levelling and disturbing influence of scientific discussion and observation.

But to return to the toast list. The Worshipful the Mayor next took the matter in hand, and gave the healths of Lady Ridley and Mrs. Ellison, whilst each husband, as in duty bound, made suitable response. The Duke of Sussex was to sleep at Blagdon that night, and now the hour of his departure drew nigh. The Chairman was commanded to explain that he had a toast to propose. "His Royal Highness then rose, and said, there were moments when perhaps it might be said it was a pity to have enjoyed them, as the remembrance of them was only productive of regret." The Royal guest's oratory was certainly original, consisting for the most part of a series of Delphic

utterances. You would certainly suppose, but for the context, that he was alluding to forbidden pleasures. He went on to say, "Such, he could truly say, were his emotions on that occasion, for had he not spent so pleasant an evening, he should not have felt that regret which he then experienced, when he was obliged to take his leave of them. But," added his Royal Highness, "the least said is best mended, and he would therefore conclude by proposing a toast in the language of a favourite *poet*, and old friend of his, Captain Morris—

> 'One toast, my good friends, I propose ere we pass,
> May life's sweetest concord be spent round our glass.'

The pleasure which he had experienced on that day he only hoped was reciprocal, and that it would be lasting. In concluclusion, his Royal Highness emphatically and feelingly exclaimed, 'God bless you all!'"

A most sweet, literary, oratorical, and good-natured Prince, and pious withal. Happily for us we may still gaze on the counterfeit presentment of his features in the Society's committee-room. He stands there in royal robes, and with a most conspicuous garter round his left knee. If we remove the clothes we have a jolly, fat, unintellectual man, from whom no great things would be expected, and the accidental clothes should not too greatly increase the severity of our judgment of a man who, at the least, was of a kindly disposition.

He had completely won the hearts of the Newcastle folk gathered around that social board at the Assembly Rooms, and if we fail quite to catch the reason for the enthusiasm with which they greeted and treated him, we must picture the sympathetic influence of a general determination to be delighted, the stirring effect of words earnestly spoken, even when they do not bear the perusal of long subsequent years, the English

THE DUKE OF SUSSEX, K.G.

exultation in royalty, by which every class of the community is thoroughly permeated, and the genial and fraternal glow which a good dinner and its accompaniments diffuse throughout the system, and which awaken the more sentimental tendencies of the human heart.

The Prince retired from the banquet about half-past eight o'clock, amidst every demonstration of the most enthusiastic attachment and respect, the company all standing, and the band playing "God save the King." "Mr. Lambton, we regretted to observe, appeared extremely indisposed."

And little wonder! He had not been well to begin with, and the festivities of the day had already been somewhat prolonged for a sick man. The strong probability is that upon the following morning a large proportion of the company would also "appear extremely indisposed;" for, whilst Sir Matthew White Ridley and Sir Charles Monck took the Royal Duke off to Blagdon, Mr. Ellison was called to the chair, and the fun began afresh, every new toast being drunk with three times three, and, as though that were not enough to relieve the pent-up feelings of the convivial company, the three times three was frequently followed by "loud cheering."

The choice of Mr. Ellison must, for a moment, have seemed somewhat unfortunate to such valiant trencher-men, for he began by regretting his own delicate health, which would tend to his giving them but little satisfaction as their chairman. But he was still well able to get through more work than falls to the lot of most men who preside over a dinner in these degenerate days, and he was number two. He proposed "The health of Lady Louisa Lambton, and prosperity to the House of Lambton." Mr. Mayor then rose, and explaining, in rather a peculiar way why he had not included them in his former toast to the wives of the Borough Members, gave "Lady Loraine and the family

at Kirkharle," for which Sir Charles Loraine returned thanks "in a neat speech," which was received with much cheering. The chairman again apologised for his delicate health, but proceeded to give "The Coal Trade," "The health of Sir Charles Monck," "who differed from him a little in opinion, but never in anything that concerned the interests of the town of Newcastle," and "The health of Sir Charles Loraine," which Sir Charles Loraine duly responded to.

The chairman then gave the health of the Sheriff of Newcastle, who, in returning thanks, stated in terms how he revered the House of Brunswick, and how proud he was of "the attention paid him since he came into his present official situation." Have we not heard the echoes of that speech in the utterances of more recent civic dignitaries? Next, the chairman "begged one more toast before he retired," and that proved to be "The Committee of Management, and thanks to them for their services." To this Mr. Thomas Hodgson, the editor and part proprietor of the *Newcastle Chronicle*, then a strongly Liberal paper, and one of the Rev. William Turner's congregation, replied upon behalf of the Committee of which he was an active member.

And now Mr. Ellison was obliged to quit the chair. Only seven toasts had been given during his tenure of office, and ten speeches made, but he was in poor health, and was to be pardoned any shortcomings upon that account.

Sir Charles Loraine was his successor. He was one of an old Northumbrian family, and was the fifth member who bore the title of Baronet, but he does not seem to have been remarkable otherwise. He began his duties on this occasion by proposing "Mrs. Mayoress." As the Mayor does not seem to have acknowledged the courtesy, we may presume that he too had retired from the festive board, and we can readily

believe that the labours of the day had told heavily upon him. But the Rev. William Mark stepped into the gap. He began by giving his opinion "that clergymen should have nothing to do with politics, and that the more they interfered with them the less they did their duty as ministers." It is a view which is still held, and even practised where neither "Squoire, nor Choorch, nor Stäate" happen to be involved in the special question of politics upon the carpet. But Mr. Mark went on to utter a dark saying which, at this distance of time, it is difficult to understand. It has, however, a certain interest, for we see that the happy diners were growing more confidential if less intelligible. "Whether it might impede his preferment or not," he valiantly said, "he would propose the health of the Heir Apparent of the House of Lambton, and may he live to succeed his father—and may he inherit his father's virtues—may he inherit his father's abilities—and—what shall I say—yes, I will—may he inherit his father's principles."

We must all hope that the heroism of this courageous clergyman neither led him into any kind of trouble nor stood in the way of his receiving the preferment which he was evidently expecting.

After this the Chairman proposed the health of Mr. Green, the architect of the intended new building, and he returned thanks for the very flattering compliment paid him. Then was drunk "the Committee of these Rooms, and thanks to them for granting the use of the large room on the present occasion." And now Mr. Emerson Charnley was allowed to take up the tale. The famous bookseller, son of a famous bookseller, was an active member of the Committee, and took a leading part in the affairs of the town, which were, indeed, to some extent settled in his back-shop in the Bigg Market. He now gave a

toast which he thought should have been given at an earlier part of the evening. He explained that not only was a building contemplated, but also an extensive museum of natural history. The foundation-stone of the former had been laid that day, the latter the Society had been enabled to purchase. He spoke of the exertions of Mr. Fox, the value of the collection, the generosity of the subscriptions towards its cost, and said that "the celebrated Bewick had contributed his subscription and sanction to the plan, a name that did honour to the country, but more especially our own neighbourhood. He concluded by hoping that ere long we should have such a collection as would teach the young and improve the old in this delightful science, and equal to any other collection of Natural History in this kingdom. Mr. C. then gave the health of Mr. G. T. Fox and the Subscribers to the Wycliffe Museum."

After this had been duly honoured, the Chairman proposed "The Heir to the House of Blagdon," and at a quarter past ten he left the chair. But this by no means meant that the conviviality of the evening was at an end. The Sheriff was fully equal to the emergency, and became the fourth Chairman, leading off at once with the important toast of "Prosperity to the Shipping interests of this Kingdom."

But at this point the reporter broke down. He had heard thirty-five toasts proposed and fifty-three speeches made, and it is as ill to have a surfeit of good things as to starve. The record states that "various other toasts were drunk" (probably not the only things which were drunk), "and the hilarity of the evening prolonged to a late hour. Thus ended the enjoyments of one of the most animated days Newcastle ever witnessed."

I have dealt with this "animated day" in so much detail because its story illustrates more forcibly than anything else with which I am acquainted the many changes, in mind and

in manners, which the past seventy years have brought. We read in the house which our fathers builded, but the world in which that house stands is a new world, and the people by whom it is inhabited are another people.

It may even be that in some things we are, after all, better than our fathers.

CHAPTER V.

THE SOCIETY AT HOME.

WE saw in the last chapter with how much good-will the building of the Society's new house was begun. We are now to learn that in such a great undertaking the old proverb, *Ce n'est que le premier pas qui coûte*, is not correct. No proverb is always correct ; its truth depends upon your standpoint. It is but seldom in actual life that the anticipation and the realisation correspond. The building of the home for the Society proved no exception to this rule. We have seen that the expenditure of the Building Committee was nominally restricted to £4000, but within six months of the laying of the foundation-stone they reported to the annual meeting of the Society that they contemplated certain alterations in the architect's plans, which would entail an additional expenditure of at least £1000. The meeting agreed to the alterations proposed by the Committee. The sum of about £3600 had been subscribed or promised towards the expense of the building, but the site had cost more than £1100, and it was proposed to meet the deficiency by obtaining a mortgage upon the premises, and the sum of £2000 had already been offered at 4½ per cent., as low a rate for such an advance in those days as it would be high now. Then it was also agreed

that the annual subscription should remain a guinea and a half, and thus would not only part of the extra cost of the building be defrayed, but the extra expense of cleaning, lighting, and taking care of it when finished, would also be provided.

The architect, Mr. Green, lost no time over getting the requisite specifications ready. The masonry contract was let, as I have already stated, to Mr. Ions, of Gateshead, at £1977, and that for joiner's and carpenter's work to Mr. Cuthbert Burnup for £1129. The rate of progress which the contractors made was highly satisfactory at first—at all events, when all the difficulties were taken into consideration. During the first winter, for an unusually long time, out-of-doors work was not possible, for there was what we in this part of the country know as "weather" in abundance. In January and February, 1823, there was a six weeks' storm of unusual violence. Travelling in any shape was impracticable for part of the time. The stage-coaches stayed in the town. The mail coach had to be abandoned near Swarland, and no trace of it was visible until after many days' thaw. On one day, during the storm, the mails for the north were despatched on thirteen saddle-horses. At one place on Gateshead Fell the snow was level with the top of a two-storey house, and here the guard of the London mail narrowly escaped a terrible death. Well is it described as "a dreadful snowstorm."

But this makes the rapid progress of the building all the more remarkable. The Building Committee became rather too sanguine, and ventured to assure the Society that it would be ready for occupation before the end of 1824. At the annual meeting held in March of that year, they speak of the exterior as completed, and say that "owing to the very favourable winter, no inconvenience has been experienced" from delays consequent upon the enlargement of the building (already

alluded to) and certain difficulty in obtaining stone, but "the different kinds of work have proceeded in such regular and uninterrupted order, that not only has the building been completely covered in without receiving the slightest injury from the weather, but the Society may assure itself of the certainty of being in the occupation of it before the close of the year. Much, indeed, remains to be done; but from the progress which all the work is now making, there is no fear of its being completed before that time." I suppose that they really meant that there was no fear of its not being completed, but completed it was not. They were too hopeful, and when March again came round the Society had not yet taken possession, but the members seem to have been quite satisfied with the progress which had been made. Indeed, at the annual meeting in 1825 the Building Committee expressed their "highest satisfaction with the attention and skill of all employed in the erection," and their view appears to have been generally adopted.

The most important question which they had then to consider was that of the best method of lighting the building. I have explained how certain shops in the town had been lighted with gas since January 1818, but coal gas was still an expensive luxury, and people had no real knowledge of what was the best way of utilising it, and other cheaper methods of artificial illumination were much pushed. There was somewhat the same kind of feeling about this new illuminant as there still is about the electric light, and we shall see in a later part of this chapter how, at the present time and in this matter of lighting, history is repeating itself. The Building Committee had carefully pondered the question, and, wishing to get the most economical, cleanly, and effective system, they had determined to adopt oil gas. Its greater cleanliness and brilliancy than coal gas were acknowledged, and the supply would be under their

own control. At a cost of £51 10s., exclusive of the gasometer, they had obtained a small apparatus from the patentees, and the Society was to manufacture its own oil gas. The cost of the apparatus proved to be but a small part of the entire expense, the piping, gasometer, and plumber's work coming together to nearly five times as much. And the whole of this was thrown away or nearly so, for in two years the Committee reported that the apparatus was too small, was "exceedingly difficult to manage, and was, besides, continually choaking up." They, therefore, must either replace it with a larger apparatus or make use of the town gas, and, in the state of the Society's funds, they recommended the latter expedient.

The Committee went, in this report, into a detailed explanation of their reasons for advising the Society in the first instance to manufacture its own gas. In 1824 they had applied to the Gas Company to ascertain at what price that company would supply the number of lights wanted. They asked £3 a light, or, if supplied by measurement, 12s. 6d. per thousand feet of gas. This was, of course, a most disheartening demand. The Committee correctly believed that the payment for gas consumed would be more satisfactory to all parties if it were by measurement and not by burners. But in 1824 "gas-meters had not been introduced into the town, and from the accounts which the Committee had received of them, they were not themselves very strongly impressed with an opinion of their utility, nor did they know that the Company here would be willing to admit them; the Committee had, in consequence, always thought that a gasometer on some part of the Society's premises would be necessary."

But no sooner was the oil gas apparatus erected than the Committee discovered that the Gas Company were privately offering to supply several of the manufacturers of the town with gas at 7s. 6d. per thousand feet. Had this been known sooner,

the oil gas experiment would never have been tried, but as the expense had been incurred, the trial had to proceed. In a few months the apparatus was useless. Then the Gas Company was again approached ; but they said that the charge of 7s. 6d. was only an experiment which they were afraid would not answer, and that the Society must pay like other people. "Upon this understanding it was agreed to receive the Company's gas into the gasometer, an account being kept by both parties of the number of feet received each time the gasometer is filled. Since that period the Building has been lighted with the Company's gas, and a bill has been received from the Company charging it at 10s. per thousand feet."

The concluding paragraph of this part of the report is of special interest: "The Society have the satisfaction of knowing that their supply of gas is measured by their gasometer with accuracy and safety. The Committee will not say that gasmeters are necessarily inaccurate and unsafe; but they have been found inaccurate, registering sometimes the same number of feet when the burners have been reduced one half, and, on the other hand, registering none when they have been doubled: and they have also been found unsafe."

Upon the 18th July, 1825, the new building was opened to the members for the perusal of periodical publications, and for the general purposes of the Society a week later. It was abundantly evident that the cost of the work would greatly exceed all estimates, although it was yet too soon to say what it would amount to. Many important alterations in, and additions to, the original design had been made as the building progressed, and the whole had been finished in a better and more costly style than had been originally intended. The Committee were empowered to raise £5000 upon mortgage of the premises at 4 per cent. interest.

FRONT VIEW OF THE SOCIETY'S BUILDING.

But I have not explained what manner of a building had been erected, or what was the accommodation which it afforded. That it was greatly admired by the people of Newcastle is shown by the fact that, twelve years after it was opened, the Corporation in their Improvement Act recited as follows:—

"And whereas the new hall or library of the Literary and Philosophical Society, situate in Westgate Street, is an ornament to the said borough, but the view thereof is much obstructed by an ancient dwelling-house belonging to Mr. Robert Leadbitter and now in the occupation of Mr. Joseph Anderson; and it is desirable that a part of such ancient dwelling-house should be removed, in order to open out the view of the said new hall or library: Be it therefore enacted, That it shall be lawful for the said Council to take down and remove so much of the said dwelling-house, and of the offices belonging thereto, not exceeding fifteen feet in depth from Westgate Street, as adjoins to the said new hall or library and to Westgate Street aforesaid; and that no building, except a fence wall not exceeding ten feet in height, shall hereafter be erected upon the site of such part of the said dwelling-house as shall be so taken down, nor upon such part of the court-yard of the said Robert Leadbitter as is situate between the said street hereby authorized to be made from Collingwood Street to the Scotswood Road and the said part of the said ancient dwelling-house of the said Robert Leadbitter hereby authorized to be taken down, without the license and consent of the said mayor, aldermen, and burgesses, under their common seal, first obtained for that purpose."

As it was when first built, so it is now externally, a plain, heavy, well-constructed Doric building; but the ground floor has been greatly altered. What I may call the large hall and the handsome staircase remain as they were. The Towneley vases above the first landing, and the casts of the Elgin marbles

in five compartments at the top of the staircase, were the original ornamentation. The Lough statue, the slabs from Nineveh, and the important oil-painting by Mr. W. B. Scott, are gifts subsequently acquired. I shall have more to say about them hereafter. Immediately on the left upon entering was the committee-room, which is now used as an ante-room to the lecture-room; and next came two apartments then occupied by the Antiquarian Society; whilst on the right was a large room for the Society's scientific apparatus. A door at the end of the passage led into the lecture-room, which would accommodate about 300 persons, but it was not a pleasant place.

The large library upstairs remains as it was originally, with the important exceptions of the roof and the method of lighting, which have been greatly improved. For simple nobility of appearance it cannot be surpassed. The gallery which surrounded it has not been altered, nor has the narrow staircase which connects it with the main room. From the east end of the gallery the Museum was entered. It was too small, only 40 feet long and 20 feet broad, and for many years it has been used as the committee-room, and also as a reading-room. The reading-room proper is still, as it was then, on the left as the library proper was entered. The principal room was 79 feet in length by 40 feet in breadth, and 42 feet high.

The first meeting which the Society held in its new apartments was upon 6th September, 1825, when the Rev. William Turner delivered an address, which was afterwards printed by the request of the members. He gave a short account of its history and present state, explaining that "the idea originally contemplated was a meeting for literary and philosophical discussion; and agreeably to that idea, regular monthly meetings had been held, at which a series of papers had been produced highly creditable to their various authors." But "it was soon

found that there prevailed a wish to extend the plan of the Society by super-adding the establishment of a public library; the consequence had been the gradual formation of the noble collection which now adorned the walls of the magnificent room under a part of which they were then assembled." He then went on to defend the formation of Public Libraries, which had been attacked on the ground that "while they induce a mediocrity of information apparently favourable to morals, as affording the means of occupation to the leisure hours of the manufacturer, the artisan, and mechanic, which might otherwise have been spent in mere vacancy, or something worse, there is a danger that, by the circulation of books of every kind, the public principles may be corrupted; that while they have almost created the character called a well-informed man, and exalted in the scale of intelligence men of no profession, they have a natural tendency to depress to the same level those whose professions are denominated learned; and even to destroy amongst them that pertinacity of meditation, correctness of reasoning, and exactness of style, which are best formed by the use of a small library, well selected and digested by frequent perusal."

These views were combated at what now seems somewhat excessive length, but there is a curiously apologetic tone about the defence which makes us feel that, in those days, the attack was felt to be really a serious matter. Mr. Turner went on to explain the further important extension of the Plan of the Society when it was resolved to establish the Lectureship on Subjects of Natural and Experimental Philosophy in connection with it, and described how this had been carried into execution. Twenty-two courses of Lectures had been delivered, "with various advantages for assistance to the Lecturer in the experimental parts, and, of course, with various degrees of satisfaction to his audience and himself."

The formation of a Literary Club amongst the members of the Society, in 1814, was explained, and certain jealousies which it had aroused were removed. The beginning of the Antiquarian Society, about the same time, "occupying apartments in the same building as ourselves, and proposing to exhibit its antiquarian stores to the public inspection in such a way as to render them, at the same time, an interesting decoration to the open space behind our building," led the speaker up to the new and commodious premises in which the Society met for the first time.

And he concluded by explaining in considerable detail the extreme liberality of the Society's unique constitution, stating that it had been celebrated even by "Mr. Brougham in his late pamphlet on Mechanics' Institutes;" and he described the steps which it was intended to take to place it upon a firm legal basis. He alluded to "the ample foundation which has been laid for a Museum of Natural History, through the intervention of Mr. Fox, and the very liberal terms on which he purchased for the Society the Wycliffe collection. The only danger is lest, in this respect, our apartments may not be sufficiently extensive."

This danger was, indeed, a real one, but one which could not be avoided, and the accommodation sufficed for more than half a century of honest work. But when we find that, at this very first meeting in the new building, Mr. William Hutton announced his intention to present a series of 1200 geological specimens, Mr. John Adamson to supplement that gift by 300 more, and Mr. John Thornhill to add an Herbarium of British plants, we begin to appreciate the grounds upon which Mr. Turner's apprehension was based.

We have now got our Society housed in its permanent home, and have only to give some account of the alterations and

additions which have been made in that home during the seventy years of occupancy already flown. But in these days of shortened hours and simplified duties,—when all that pertains to domestic service has been revolutionised in this free country, and you must cross the Channel to find the early rising, late working, and low wage, once characteristic even of our own country,—it is not without interest to peruse the "Outlines of Duty of two servants wanted by the Literary and Philosophical Society of Newcastle-upon-Tyne," which were printed and distributed by the Committee in December of this year, 1825.

The chief or leading part of the man's duty was to make the gas, and to attend to the burning of it; but he had a multitude of other things to attend to. Amongst these was the scrubbing of the flags in front of the door: "the whole should be scrubbed down once a week, but if advantage were taken of every shower of rain, great labour on this point would be avoided." "At twelve o'clock he must have himself cleaned"—the instructions do not specify by whom—"and attend the Museum, or as he may be wanted, from that hour to three." Then he was to keep the back-yard and garden clean and orderly; was to be constantly about the building; keep up the fires; blacklead the grates, stoves, and hearths, and clean the fenders and fire-irons; clean the mats and scrapers; keep the outside rails clear of nuisances, and the urns on the staircases free of dust; assist the librarian in locking-up; clean the windows; keep the water cistern filled; the brass hand-rails of gallery and staircase, and the oakdoors, handles, and finger-plates, in order and bright. "Besides what is stated, he must endeavour to make himself as useful as he can, and to make it his study to keep the building and rooms in proper order, and as clean as possible. He must also be ready to give his assistance whenever required.

During the Lectures, his attendance or services will often also be wanted for them."

Two days in each week were entirely taken up with gas-making. He had to wear "old clothes" in the gas-house, fustians up to twelve o'clock, and a suit provided by the Society during the rest of the day. What with making gas, cleaning the building and himself, changing dresses, and making himself generally and ubiquitously useful, his office would be no sinecure. The duties prescribed for the woman are worthy of those laid down for the man.

But this is by way of interlude. The Building Committee was not able to give a full account of the sum actually expended upon the new premises until March 1827, and it then proved to have been £13,756 5s. 1½d., including the cost of the ground. This amount had been raised thus:

By the annual half-guinea contributed by members	£3,350	0	6
Donations	1,869	14	6
Borrowed	8,200	0	0
	£13,419	15	0

the balance being discharged out of revenue.

The large amount of borrowed money proved a source of constant anxiety and trouble to the Society, and I shall have to speak at some length about the many unsuccessful devices for its liquidation, and to show how, through the enlightened liberality of one of the most famous members, the incubus was at length removed.

It is not a little amusing to see with what dismay these accounts were received, and how busy the prophets of evil at once were. One said with some truth that "private societies, as well as national governments, have their periods of folly and

extravagance," and went on to show how the incidental and necessary payments would exceed the receipts, without leaving anything to purchase new books, or to pay off the enormous amount on mortgage: the two guinea subscription would have to be again increased, "and consequently the library would lose its former usefulness, and become merely a fashionable lounging-place for the opulent classes of society." Another complained that the Committee had concealed the true financial position, and spoke of "the ruin that threatens the institution." He declared that the proposed sinking fund was a complete humbug; showed how and why the expenses must exceed the receipts; and explained precisely how, in order to purchase any books at all, the Society would have to borrow £200 every year, thus plunging deeper and ever deeper into the slough of financial embarrassment.

You cannot reply to a prophet, but you may, as a rule, disbelieve him if he prophesies nothing but unadulterated evil. Sixty-seven years have flown since the utterance of these gloomy vaticinations, and they have not yet been fulfilled.

For the men who raised our building were not such as lie down before difficulties. They fully realised their situation, and began at once to grapple with it. The despised sinking fund itself is one proof of this. The members and friends of the Society subscribed £2000 in amounts of not less than £20, and £1200 further was obtained on loan. These sums were to be repaid by setting aside a certain part of the annual income each year for that purpose. But this and other ways in which it was sought to raise the wind, I shall deal with hereafter.

Because, as this chapter tells of the Society at home, I must note, before going further, that it had already begun to gather together its interesting and valuable collection of busts, portraits, and other pictures. Its first acquisitions of this kind seem to have

been made in the Session 1823-24. "That venerable ornament of his native town, Dr. Charles Hutton," died on the 27th January, 1823. He is a man to be remembered. The son of a "deputy," and himself in early life a hewer at Benton Colliery, he worked his way up until he became one of England's leading mathematicians. The University of Edinburgh gave him the degree of LL.D., the Royal Society made him a Fellow, and appointed him Foreign Secretary; he was for thirty-four years Professor of Mathematics in the Royal Military Academy at Woolwich; and his mathematical writings won him European fame, his paper upon the "Force of Exploded Gunpowder, and the Velocity of Balls projected from Artillery," gaining him many flattering testimonials, and amongst them the gold prize medal of the Royal Society. This, and his researches into the density of the earth, were the works by which he was to be remembered.

Dr. Charles Hutton was one of the first Honorary Members of our Society. At the banquet which followed the laying of the foundation-stone of the new building in 1822 he had been specially honoured, but the Annual Report presented in March, 1823 told of his death. He had not forgotten our Society, for he bequeathed to it the valuable marble bust of himself by Chantrey, which had been presented to him by public subscription the year before. In September 1823, Mr. Andrew Morton presented the Society with his portrait of the learned Dr. Hutton, and thus the Newcastle people may to-day have a good idea of how one of their most famous townsmen really looked.

Then followed the gift by the Rev. John Headlam of a portrait of Marmaduke Tunstall, who collected the Museum which the Society had purchased; the further present of a cast from the bust of James Watt, given by his son; one from that of Matthew Boulton; and a marble bust of Thomas Bewick, by

CHARLES HUTTON, LL.D., F.R.S.

Bailey, presented by the subscribers. The next art present did not give unqualified satisfaction, but was the occasion of a long and rather bitter contest. This came about simply enough.

John Graham Lough, who was born at Greenhead in 1798, was certainly one of the few Northumbrians who have had an undoubted touch of genius. The son of a husbandman, he had to make his own way in the world, and found it a difficult task. He came to Newcastle; got work upon the Society's new building; flitted to London, where, "in an obscure lodging, he had long wrestled with that giant with a hundred hands, Adversity, but had ultimately succeeded in perfecting works of the most astonishing character." His sudden leap into notoriety is one of the pleasantest of latter-day art romances, and neither the fact nor the fiction are without some justification. In judging of a man's art we have nothing to do with how it was produced. It must stand absolutely and simply upon its own merits. We should scarcely now speak of Lough's art as his contemporaries spoke of it. His works are only great in the sense of being big. But in speaking of him as a man we have to consider the pit from which he was digged, the opportunities he had of ascertaining and appreciating the truth, and the work which was going on about him and which coloured his whole mental life; and, so doing, we shall not hesitate to call him a great man.

In 1827 Lough exhibited his colossal statues of "Milo" and "Samson" in the Hanover Square Rooms in the metropolis. "Milo" is that work which is said, I fear upon slight authority, to have introduced him to the public gaze. Henry Brougham had advised upon the strange case of a young mason who, finding that his garret was too low to admit of a figure upon which he was working being constructed of sufficient height, removed part of the ceiling. This was so strange a case that

the leading Queen's Counsel and greatest orator of the day went to inspect the *locus in quo*. There he found this young Northumbrian, who was all but starving, but who nevertheless laboured heroically at his giant figure of him "who of old would rend the oak." Wherever Brougham went (and he went everywhere) the tale was told, and at once Lough became the lion of the day. In the opinion of the press of that day, his exhibition in the Hanover Square Rooms "proved him to be a man of first-rate genius, and a decided ornament to British art."

In 1828 Lough presented a cast of "Milo" to this Society, and it was placed in the Library, amidst the plaudits of the Committee and the local press.

"Then began a battle grim and great." Mr. John Fenwick, afterwards one of the Society's secretaries, wrote to the Committee submitting that "the figure was too open for a place of general resort, and that the credit and respectability of the Society would be better preserved by removing the cast to the Committee-room, or some other apartment where female delicacy might not be exposed to that trial to which it is now subjected." The Committee, however, "saw no cause to make any alteration in the situation of the cast, the objections to it evidently arising out of a misapprehension of the principles upon which the practice of statuary is regulated:" a fine unmeaning reply to a silly attack. Mr. Fenwick attended the next Committee meeting, and, not unnaturally, complained of the reply made to him, pointing out that he had made no profession of acquaintance with "the principles of statuary," but that "he supposed that the Committee held that, when they came in contact with the principles of morality, the principles of morality should be given to the wind."

It is not easy to follow closely the meaning of this declaration. The complaint, the reply, and the rejoinder are alike remarkable

for the skilful way in which they avoid relation. But Mr. Fenwick took the practical step of giving notice that, at the next general meeting, he should move "That the Library is not a fit place for the reception of the bust of 'Milo.'"

And then the warfare broke out in the local press, both in prose and verse. The verse was worse, perhaps, than the statuary. In prose, "that stupendous work of art, the colossal figure," was extolled; members were exhorted to attend the meeting, "and both by their sentiments and votes rescue the Society from the stigma which would attach to it should such a motion be carried." On the other hand, an "Old Member" wrote that he was compelled, when he took his daughters or female friends to the Library, to avoid the part of the room where the statue was, and, if possible, to divert their attention to other objects.

The meeting was held on the 6th January, 1829, and Mr. Fenwick submitted the following theses:—

I. That to place a colossal statue in a library was out of good taste.

II. That the general exhibition of an open statue like Milo was a violation of good old English feeling, and had a tendency to reduce the national character to that of the French; and

III. That such an exhibition was contrary to Christian morality, which enjoined modesty and shamefacedness on the female sex.

No one venturing to second the motions, Mr. W. H. Brockett did so formally, in order that they might be fully discussed; and then Mr. Christopher Cookson, "the Barrister," led the opposition in a vigorous and humorous, but abusive, speech, which Mr. Fenwick described as "one of the most profligate and infidel speeches ever heard in the Society." If this description were accurate, the Society is to be congratulated upon the high

average tone of its speeches. One of the severest things Mr. Cookson said was that "whatever indelicacy there was existed, not in the statue, but in the vitiated minds of those who objected to it." The discussion was a warm and lively one, but Mr. Fenwick only got three persons to vote with him, whilst there was "a tremendous majority in favour of Milo remaining where he is."

Poor old Milo! how we marvelled at him in the days of childhood, and perhaps shuddered a little at him when we grew a little older and had learned what the great men of old could do in sculpture with more knowledge and less material! But none of us ever dreamed that his peaceful existence in the Library reflected in any way upon the morality of the Society. Perhaps few of us shed even a tear of memory when we heard that, in the sad fire by which the Centenary gathering of the Society was terminated, the colossal cast had disappeared for ever.

But other presents of an artistic kind were made to the Society about this time. Mr. Edward Train, still remembered by many of us as the most genial of painters, and whose undoubted ability gave promise which was never quite fulfilled, presented the Society in 1828 with a portrait of Mr. Robert Doubleday, who had died five years before, and who had done yeoman service to the Society from the first. The *Newcastle Courant* of that day said of this portrait, "It is an excellent likeness, and a most beautiful drawing, the more extraordinary as being executed with pen and ink. It looks so like a proof print of one of the finest species of engravings, that it would almost deceive the eye of an experienced artist." Mr. Robert Doubleday is chiefly remembered now as the uncle of a greater man who, in service to the Society, trod in his footsteps.

When I mention Thomas Doubleday I name the most distinguished literary man our good old town has given birth to.

THOMAS DOUBLEDAY.

A poet, a novelist, a dramatist, a politician, an economist, his pen had a wide range to suit his capacious mind. But he will live longest as the writer of the best angling songs which were ever conceived. His economic works deserve careful perusal and show his profound thought and originality, but they are already, for the most part, of the far past. His "Coquetdale Angling Songs" will live so long as the Coquet flows and fishers tread her braes. They are instinct with the true spirit of poetry, and are one of the chief glories of our city and of the county which adjoins it.

Thomas Doubleday was for many years an active and important member of the Committee of the Society. He was eighty-one years old when he died at the close of the year 1870.

In that same year, 1828, the President, Sir J. E. Swinburne, presented the Society with "the highly-finished portrait of himself by T. Phillips, Esq., R.A., which is not only highly valuable in itself as a capital work of art, but also as, by its striking likeness to the esteemed original, it presents him continually to the minds of those who have so long been his associates, and will convey to their successors an idea of the Society's early Patron and constant Friend."

Sir John Edward Swinburne of Capheaton became the President of the Society in 1798, succeeding Mr. John Widdrington, the first President, who died in November 1797, and continuing to hold the office for forty years. He was seventy-six years old when he resigned, but he did not die until September 1860. He had paid much attention to his duties, and was peculiarly well fitted to discharge them with dignity and ability. He was a fellow of the Royal Society, and President of our local Society of Antiquaries from the time of its formation until his death. Both the present baronet and the poet Algernon Charles Swinburne are among his grand-children.

At this time a movement was on foot "to procure for the Institution some Work of Art as a lasting Memorial of the eminent and gratuitous services of the Rev. William Turner, as one of the Secretaries to the Society for a Period of Five and Thirty Years, and Lecturer of the Institution since the establishment of lectures in 1803." It was resolved at a meeting of the subscribers in December 1828, that "E. H. Bailey, Esq., R.A., should be the artist employed to execute a Bust of Mr. Turner, and Mr. Andrew Morton should be the artist employed to paint the Portrait." At the anniversary meeting held on the 2nd March, 1830, the thanks of the meeting were "given to those ladies and gentlemen who have, by their voluntary subscriptions, put the Society in possession of the valuable Bust and Portrait of the Senior Secretary."

Although I shall get in advance of my story by so doing, I may mention here that Mr. Bailey was himself the donor (in 1832) of the cast of his bust of Lord Brougham, which we still possess. In the same year a bust in marble of James Losh, and, in 1836, "the splendid colossal Monument" of the same gentleman by Lough, were presented by the subscribers. Mr. Losh, who died in 1833, was Vice-president of our Society for several years, and Recorder of Newcastle for rather more than a year. He was a zealous reformer, and took a leading part in the movement for the abolition of slavery in the colonies. For thirty-one years he had made and carefully recorded meteorological observations, and, in memory of him, his sons had these records copied, and presented them to the Society, bound in seven folio volumes.

The "large picture by Mr. Train, representing Highland Scenery, with the introduction of Macbeth and the Witches," which now adorns the Committee-room, was given in 1833 by Mr. W. Hutton and some other friends, and at the same time

Mr. Dunbar presented a bust of Earl Grey of the Reform Bill, and "a cast taken from the skull of King Robert the Bruce, discovered at Dunfermline in the year 1819."

"It never rains but it pours." At the same meeting Mr. Nicholson, of Edinburgh, sent a portrait of "our former esteemed associate, Mr. George Gray," and, three months later, a likeness of the Rev. Dr. Morrison, the eminent Chinese missionary and linguist, was given by Mr. H. P. Parker. Although born in Newcastle, Dr. Morrison does not appear to have been otherwise connected with the Society.

George Gray was an eccentric character who was something of a traveller, a teacher of drawing, a chemist and botanist, and "a portrait, fruit, house, and sign painter." He lived a simple and retired life in the Pudding Chare, and was held in high esteem by many men of science and art in many parts. He was sixty-one years of age when he died in 1819.

In July 1833, "Mr. Robson" gave the Society a bust of Laocoon, and "Richard Wilson, Esq.," a full-length portrait of the Duke of Sussex. In 1836, Earl Grey consented to sit to Mr. Ramsay for his likeness, which the artist painted for the express purpose of presenting to the Society; and in 1838, Mr. Andrew Morton received the thanks of the members "for his valuable and interesting present of the portrait of Lord Brougham."

It is convenient that, at this point, I should complete the long list of valuable gifts of a similar kind which the Society has received, nearly all of which are still in its possession and greatly add to the interest of its rooms.

In 1844, "Dr. Headlam, in the name of the subscribers, presented a portrait of the Rev. Edward Moises, whom he characterized as an eminent minister of religion, an accomplished teacher of youth; one whose labours had given a fine classical tone and cast to his pupils—who was one of the few surviving

originators of the Society, and to whom the town was under the greatest obligations for having first suggested a library in connection with this Institution, and applied himself for a series of years in making the Library eminently efficient."

In 1856, William Kenneth Loftus, another of those Grammar School boys of whom Newcastle is so justly proud, presented "the five Sculptures of the Nimroud Marbles, found by him during his excavations in the East," which now adorn the principal staircase of the Society's building. He was a keen naturalist, an intrepid traveller, and one of the most successful explorers of the realms surrounding Babylon the Great. He was the discoverer of the vast palace of Darius at Susa, the honours and spoils of which have been so largely appropriated by the French. The remains of the great city of Nineveh were the work upon which he was actively engaged when his labours were interrupted by the Crimean War. The slabs which he gave to us form an important part of these, his most recent, discoveries. He worked under General Williams of Kars, the Assyrian Excavation Society, and the Indian Government, and died on his way home from India in 1858, when only thirty-seven years old. Of him General Williams said that "a better man, a more zealous and faithful public servant, never lived." The Society received a photographic portrait of him in 1859, from his relative, Mr. James Radford.

Mr. Robert Stephenson gave the bust of his illustrious father in 1857, and in 1860 the members subscribed for those of Robert Stephenson himself and of Sir W. G. Armstrong, which are now in the Library. The photographic likeness of Robert Stephenson which hangs in the Reading-room was presented by Mr. Joseph Glynn in 1859, and in connection with the George Stephenson Centenary in 1881, Mr. Charles Mitchell, jun., made the Society a present of his copy of Lucas's portrait of George

Yours ever
Wm Kennett Loftus.

Stephenson. The portrait of Robert Stephenson himself had been presented by a few friends in 1849.

For many years Mr. William Bell Scott, poet and painter, was Master of the Newcastle School of Design. He was a distinct force in the town at a time when strong influence in literature and art was greatly needed. In 1864, when he left to live in London, some of his friends commissioned him to paint a picture which was to be hung in one of the public buildings of the town. He had already enriched Wallington Hall with a deeply interesting series of paintings illustrative of the history of Northumberland, and he now did one such painting for Newcastle. He was interested in this Society and had taken part in its management. It was his desire that the picture should be hung in its house, and we thus became possessed of the valuable "Building of the Castle."

The last gift I have to mention is that of "Some Newcastle Worthies," presented by Miss Crawhall in 1894, and the work of her father, Mr. Joseph Crawhall the elder. It represents the great men of the town gathered together on 'Change, and is probably of the year 1826. Most of the figures have been identified, and some of them are men who have been mentioned in these pages. It is a quaint, delightful, and rarely characteristic bit of the business life of the old town.

And now let us turn back to the Society at home, noting some of the chief incidents in its history which will be dealt with in more detail hereafter, but paying more particular attention to changes in the structure or in the terms of membership.

The Annual Report presented in 1829 speaks of the death of "our late lamented associate, Mr. Thomas Bewick, the eminent reviver of the Art of Wood-engraving, or rather the inventor of a new art; by which, and by his singularly felicitous application

of it to the illustration of Natural History, he has secured for himself a reputation which will never die."

He became a member of the Society in 1799, and took special interest in its collection of birds, many of which indeed appear in his *British Birds*. Those who wish to learn more about a Northumbrian of whom his country may be justly proud should read his "Autobiography," surely as charming and simple a story of a worthy life as can be met with. He was seventy-five years old when he died on the 8th November, 1828. We have no likeness of him, but there is one in the Museum of the Natural History Society at the Barras Bridge, which well repays a pilgrimage to that noble institution so sadly neglected by the people for whose benefit it was built. This portrait is by that fine but most enigmatical artist, Good of Berwick, and it is a living likeness.

The history of that Natural History Society I shall have to tell in some detail in a subsequent chapter, but I may mention here that the Literary and Philosophical Society gave birth to it in the month of July 1829. In the same month the parent society made a strong endeavour to obtain the full benefit for the people of Newcastle of a gift made to them nearly ninety years before, but from which they had profited little; and this was but one of a series of similar attempts which extended over a period of more than fifty years, and which were occasioned by the flagrant maladministration of the noble benefaction known as "Thomlinson's Library."

Dr. Robert Thomlinson was for some time Lecturer at St. Nicholas' Church. On the 31st January, 1735-36, he wrote to the then Mayor of Newcastle-upon-Tyne, Walter Calverley Blackett, to tell him that, wishing that on his death his books should be put into a public way of being useful, he had left in his will his whole Study of books to the Mayor and Burgesses

of Newcastle, and he asked the good Mayor to build a Library to hold them, which the good Mayor accordingly did. He was at that time Alderman Blackett only, and we may well regret that his great influence obtained for him the permission to erect the building close to the south side of the fine old church, and that his small taste led him to be responsible for so hideous a building. He became a baronet in 1749, was five times Mayor, represented the Borough in Parliament for forty years, and was so popular that he was long known as the "King of Newcastle."

Dr. Thomlinson kept his part of the bargain. He thought the hideous excrescence "a handsome Fabric," and proceeded, in 1741, to put some sixteen hundred volumes into it. In the same year he made his will, by which he left the remaining volumes to the town, as he had promised. He also left £5 a year to be spent in purchasing further books, and the Mayor endowed the Library with £25 a year which was to provide its keeper, who was to be chosen from amongst the Curates of the Churches of St. Nicholas, All Saints, St. John, and St. Andrew, in Newcastle-upon-Tyne, preference being given to those of St. Nicholas.

The direction of the Library devolved upon the Mayor of Newcastle, the Archdeacon of Northumberland, the Vicar of Newcastle, and the Lecturer of St. Nicholas for the time being. Excellent regulations were made for the borrowing of books, giving security for their return uninjured, and the like; but, like all similar regulations, their value depended upon their being strictly observed, which they never were.

Dr. Thomlinson died on March 24th, 1748, but it is probable that he had himself seen his whole collection of books placed in their intended home before his death. For some years afterwards the Visitors seem to have really looked after matters in a superficial way, examining the books on the shelves

with the written catalogue. Their report made in 1789 was that the books were in good condition, but that fourteen volumes were already missing. In the preceding year, Mr. William Charnley, the well-known bookseller, had written to Dr. Sharp, the Archdeacon of Northumberland, and had pointed out that the Library had been shut up for many years—twenty consecutive years at the least; that many of the books were much injured by damp; that the Librarian's salary was being expended without being earned, and the £5 a year left for the purchase of books was not being expended for that purpose. The diligence of the Visitors seems to have been exhausted in twenty years at the most, and the Report of 1789 to have been inaccurate, to say the least.

But Dr. Sharp took no notice of Mr. Charnley's letter, and he therefore wrote to the Bishop of Durham, who had really nothing to do with the matter; he had much better have applied to the Mayor of Newcastle, who was directly connected with it. The Bishop did nothing, which indeed was all that he had to do. There was a rush of correspondence in the public press about the Library and its neglected condition, and the Bishop was again appealed to in 1801, but with a like result. The matter was then apparently allowed to sleep until 1813, when it was proposed that a catalogue should be printed of "this valuable Library bequeathed to the Inhabitants of this Town so many years ago." The Committee of this Society agreed to bear one-half of the expense of printing, upon condition that the members should be entitled to purchase copies at cost price. But the idea was abandoned for the time, and the books got into still worse condition.

William Charnley died in 1803, but his son, Emerson Charnley, who succeeded him in the business, became perhaps even more eminent in his own line, and was as full of public

spirit as the good father. In 1826, Mr. Emerson Charnley was given leave to print and publish a Thomlinson Library catalogue at his own risk and expense, and the Librarian was instructed to attend every day, between the hours of eleven A.M. and one P.M., excepting on Sundays, Festivals, Fast Days, and Saturdays.

The catalogue was published in 1829, and the Corporation ultimately agreed to pay the cost. There was, however, still great negligence in the management, and there was frequent complaint in the weekly newspapers of the difficulties which intending readers found in obtaining access. So in that year this Society took the matter up in serious earnest. Several monthly meetings were devoted to the consideration of the wrongs of the public and their remedy. The attention of the Trustees was called to the original statutes, which required the Library to be open from seven to one o'clock every day in summer, and from nine to one o'clock every day in winter, and it was shown to them that these statutes were habitually disregarded, and that the payment of the salary was the only part of the whole performance which was regularly and punctually attended to. In order that the Society might make sure of attention, they appointed a deputation to wait upon the Mayor, and the appeal to temporal authority proved more efficacious than that to the spiritual powers had been: the Mayor called the Trustees together, and they consented to accede to the wishes of the Society.

I need not pursue this matter further. The promises which the Trustees made were broken with but small delay: for fifty years this Society endeavoured to get the books transferred to its care, upon condition that the public had full and free access to them; they were more and more wantonly neglected; if an attempt to use them or examine them were to be successful, it demanded a lavish expenditure of time and patience, and the possession of unusual persistency. From time to time the

public roused itself, got into a state of indignation and made a fuss; but it was not until the Committee of the Newcastle Public Library turned its attention to the matter in 1881, and resolutely stuck to the task, that any real and lasting reform was made. The negotiations for the transfer of the books to that Library were somewhat intricate and prolonged, but on the 1st April, 1884, the Charity Commissioners issued a scheme for the future governance of the charity which enabled the Trustees to accede to the general wish.

Four thousand three hundred and sixty-five volumes were handed over to the Public Library, but nearly all were in a shockingly dilapidated condition. Many had been deliberately mutilated by borrowers; some had pages torn out; from others the plates had been cut; most were without backs or in rotten bindings; all had been cruelly neglected by the authorities. The collection, described at an early period as "a truly noble collection of most valuable books, handsomely bound, and of the best editions: an inestimable literary treasure, worthy of a prince, bequeathed by the reverend and generous donor to the people of Newcastle," has at length found a fitting home. At the cost of six hundred and eighty pounds, and with infinite care and loving labour, it has been repaired, catalogued, and arranged in a room specially prepared and set apart for it; and it is now one of the prominent features of that admirable Public Library which is already of inestimable value, and which bids fair to become one of the chief glories of this great centre of industry as is right and fitting. The constant watchfulness and earnest labour of this Society for the welfare of the Thomlinson Library has thus borne good fruit, to the great benefit of our city and its inhabitants, and the end so long aimed at, and so strenuously striven for, has at last been attained.

Let us return to the more immediate or domestic work of our Society.

CHAPTER VI.

THE SOCIETY AT HOME.

Its Growth and its Changes.

WE have now reached the year 1830 in the history of our Society at home—a time when, in spite of evil prophecies, it was undoubtedly prospering. The Committee had turned its attention to the possibility of combining its funds with those of the young Societies which had branched out from it, but which were still accommodated under its roof-tree. The Committee trusted that they would ever remain connected with it, on terms of friendly co-operation, and that the various collections might thus form separate parts, as it were, of one great establishment, and the beneficial arrangements which had been mutually made and ought perpetually to subsist amongst them, might be firmly consolidated.

The desire was a worthy and natural one, but it was not fulfilled, and we can see now that it was well that this was so. There is something attractive in the idea of a vast building which shall contain under one roof the whole of the intellectual efforts of a city, but it is not quite a practical one. It is in its very nature too cramping. The many isolated but splendidly constructed and admirably arranged museums of Berlin afford

much greater facilities for actual work, than the noble, vast, and heterogeneous collections of the Louvre or South Kensington.

Newcastle was rapidly growing at this time, and Mr. Richard Grainger had begun those building operations which converted the picturesque, old, irregular town into the modern city of grand stone streets which are, in their own way, unrivalled by those of any other business centre. I do not think that he was concerned in the making of the new street which was to run from Collingwood Street westward past the Forth, and which was named after the family whose charming town mansion made way in our own day for the Mining Institute. The opening of Neville Street was of considerable importance to our Society, and contributed to make it what it has gradually more and more become, the centre of the twin boroughs of Newcastle and Gateshead, but it was many years before this street assumed anything like its present appearance.

In 1834 the Natural History Society purchased from this Society the land upon which they built their museum, the old museum, which has quite disappeared having been absorbed by the North Eastern Railway Company. The Antiquarian Society was accommodated upon the ground-floor of their building, and a few years later the Fine Arts Society also found a home there.

And now the Lecture Room proved too small for the number of members wishing to attend the discourses of the eminent men who were from time to time engaged to deliver courses of lectures, and, in July 1836, it was resolved to enlarge it by taking in two rooms which had been lent to the Antiquarian and Phrenological Societies for their meetings. When they reported the completion of this work to the Annual Meeting in 1837, the Committee thought that the new lecture-room would comfortably accommodate nearly, if not quite, five

hundred persons. This proved to be too liberal an estimate, and those of us who remember the old room think of it now as inconvenient and uncomfortable. But in all matters of the kind the wants of men increase: in all that pertains to personal comfort, "Appetite doth grow by that it feeds on."

With this alteration of the Lecture Room several other reforms were introduced, the chief of them being the provision of a room "as a place of deposit for ladies' cloaks, etc., and a convenient waiting-room for their servants." When our present Lecture Room was constructed in 1859-60, this cloak-room was absorbed, and the ladies had to leave their wet cloaks where they could until the existing room was made for them in 1866. It was with difficulty that any place could be found for it, but to carry the resolution to make it at all was much more difficult, and required a long and severe struggle. In one of the many discussions upon the subject, a worthy but contradictious and irascible alderman astonished the Committee by roundly denouncing the whole project as "the most disgusting and immoral proposition which he had ever heard."

I have endeavoured to ascertain the exact number of members of the Society from time to time, but this is not to be done, for the Roll and the balance-sheet never coincide, many members in past times being allowed to remain on the Roll when their subscriptions were greatly in arrear. I think that when it had completed its forty-sixth year, in 1839, there were more members than at any other date preceding 1856-57, when the subscription was reduced to £1 1s. But how many were there at this time of greatest prosperity? The Annual Report says 751 in all—690 gentlemen and 61 ladies; the Roll which accompanies the Annual Report, but which only gives the names of the ordinary subscribers (who were all gentlemen), says 699, which makes a total of 760: but when

we turn to the Treasurer's account, we find that only 700, including ladies and gentlemen, paid their subscriptions.

The fact is that the accounts of the Society have, from time to time, given great trouble to the gentlemen who have, with much ability and sometimes at great personal sacrifice, acted as Treasurer, as well as to the financially-minded members of the Committee. But, at the time of which I am writing, many improper practices had crept in—practices which are not unknown to private persons who are chronically hard up. Thus when a Committee wished to appear better than it really was, it simply ignored the debts which it had incurred, leaving them to be dealt with by its successor. The Treasurer's account showed truly what had been received, and the accounts, the payment of which law or accident had necessitated, but it gave no hint that there was anything owing. This is a simple and convenient way of keeping accounts whilst it lasts, and it saves much trouble for the time, but as a creditor obstinately remains unpaid whether you say so or not, the trouble quietly accumulates for the future at a high rate of compound interest.

In this year, 1839, the Committee brought the state of affairs which I have described before the Annual Meeting, and laid on the table a statement which showed that the outstanding debts then amounted to £473, gave the dates of their "contraction" (an unlucky word, for the tendency of unpaid debts is to expand, not to contract), and an estimate of income and expenditure for the year then commencing. The print of the Report contains the note, "These points of business have been copied into the Committee and the Resolution Books," but it is satisfactory to be able to add that in due time they were disentombed, although the evil practices were not finally got rid of for many a year.

We may pass on to the Society's jubilee year with no

special incident to note, except that, in 1840, it was resolved to keep a register at the Library of the daily atmospheric changes. The instruments which it was necessary to acquire in order to carry this resolution into effect were not to cost more than £25. The register was regularly kept until, in 1886, the North Eastern Railway Company absorbed the yard space belonging to the Society. But although of considerable interest and some value, the great extension of the town, and the erection of lofty buildings closely adjoining that of the Society, had interfered with the general utility of the register. The air-currents had been so intercepted and their true course so changed, that the Society's vane had, as an inveterate legal punster remarked, become indeed a vain thing. From time to time the Librarian received a *subpœna duces* to produce the record at some trial for damages done to crops by smoke or noxious vapours, but when by incontestable evidence it was proved that the wind was really S.W. when our vane (not unnaturally, considering the district) declared that it had been N.E., his services were not in so great demand.

I may notice in passing that on the 24th September, 1842, the library of our Society was lent to the Corporations of Newcastle and Gateshead for an important civic function. The Duke of Cambridge was staying at Ravensworth Castle, and on that day he "visited Newcastle, where, in the Library of the Literary and Philosophical Society, addresses were presented to him by the Corporations of Newcastle and Gateshead, to which he made suitable replies. The library was crowded by gentlemen connected with the town and neighbourhood, and the gallery was well filled by ladies. His royal highness passed through the library into the museum, and was highly delighted with the various specimens submitted to his notice."

The jubilee year was 1843, and in the annual report the Com-

mittee briefly reviewed the history and progress of the Society, and it was resolved to celebrate the event by a public dinner, which was held in the Assembly Rooms at five o'clock on the 6th February. In the absence, through ill-health, of the President, Mr. C. W. Bigge, Dr. Headlam presided, and Mr. John Clayton filled the vice-chair. Although ten of the original members still survived, Mr. John Buddle was the only one who was able to be present. He was then only seventy years of age and was one of the speakers, and gladly was this father of our northern coal-trade listened to, few persons dreaming that his life was so near its close. He died in October of that very year.

The dinner was rather a big affair, for there were forty-seven speeches, and some of them were a little long; but, at the very outset, the apple of discord was introduced by the Chairman himself. He twice spoke of the Rev. Edward Moises as the founder of the Society, and, whilst in proposing the toast of the Society he only referred incidentally to the Rev. William Turner, he afterwards gave the health of the Rev. Edward Moises as the founder of the Society, and ignored Mr. Turner altogether. But this was going too far. The successor to Mr. Turner in his religious office, and himself a relative of that gentleman, the Rev. J. McAlister, rose, and gently but firmly spoke up for the man who had not only founded the Society, but who had, for nearly half a century, done far more for its prosperity than any other man. He read a short extract from a letter which he had himself received from Mr. Turner respecting the origin of the Society, and in which he said of it that "it was in conversation at a friendly society of which I was a member, and which met at the house of Mr. Page, a most amiable man and a member of the Hanover Square Chapel. I was desired to draw up a paper entitled "Plan of a Literary

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Society," which, having been circulated, gave occasion to the meeting at the Dispensary which established and drew up regulations to which they prefixed my plan by way of introduction." Mr. McAlister apologised for intervening, "but he could not permit the respected Chairman's omission as to the true paternity of the Society to pass unnoticed at the earliest moment."

The Chairman, unfortunately and not very wisely, tried to defend his untenable position, but Mr. Emerson Charnley, who had to propose Mr. Turner's health, traced the beginning of the Society to the paper read by that gentleman and entitled "Speculations for a Literary Society to be formed in this town." Mr. Charnley said that whether he was *the* founder or not, he was one of the founders, and quoted with great effect a speech made by the late Mr. James Losh, in which he said: "I do not know, nor is it very material, whether Mr. Turner was the father of this Society or not; but he was the founder of its usefulness, the origin of its success, the director of its purposes, and its highest ornament from beginning to end." Then Mr. William Armstrong, who had been a member since 1798, and had known the Society since 1794, fully confirmed the accuracy of Mr. McAlister's statement, spoke warmly in praise of Mr. Turner's "characteristic modesty," and ended by saying "there was no monthly meeting at which Mr. Turner had not some information to supply, and sure he was that Mr. Turner's equal they never could live to see again."

It is strange that but half a century after the event, and only six years after one of the two gentlemen who had thus, unwittingly and unwillingly, been placed in ungrateful opposition, had retired from the secretaryship which he had held for forty-four years, and whilst both of the gentlemen were still living, such a dispute should have arisen at all. Happily there was

no doubt in the mind of the man to whom the credit had been wrongly attributed. The Rev. Edward Moises was appealed to, and at once wrote: "Mr. Moises presents his compliments to Mr. McAlister, and, in reply to his inquiry concerning the Literary and Philosophical Society, begs to assure him that Mr. Moises disclaims all pretensions to be considered as the founder of that institution, which is solely due to Mr. Turner. Towards the close of 1792, Mr. Moises received a circular from Mr. Turner inviting him to join the proposed Society, to which Mr. Moises expressed his ready consent." Thus it was finally established that Mr. Turner was the father of the Society, and Mr. Turner had himself explained that the movement for the addition of a general library was due to Mr. Moises.

At the monthly meeting in April 1793, Dr. Glover read a paper entitled "Remarks on the History of the Literary and Philosophical Society of Newcastle-upon-Tyne," in which he gave a brief sketch of the work which the Society had done since its commencement. It is interesting to note his view that its development had not fulfilled the intention of its founder, Mr. Turner, which, he held, was to found a Society like the Royal Societies of London and Edinburgh, and the Literary and Philosophical Society of Manchester. "Although," he said, "our Society has now become little more than a large reading club, the branch societies which have sprung from it have maintained the character originally contemplated by Mr. Turner."

The truth is that the original scheme was, to a certain extent, tentative. It was intentionally wide and elastic, and thus it allowed the Society to take the shape which the varying needs of the district from time to time suggested. It was better thus than if the attempt rigidly to copy some institution, existing elsewhere and under other conditions, had been persisted in.

It is well that we, who have celebrated the centenary of the Society, should see what those who were directing its affairs when its jubilee was celebrated thought of its past and hoped from its future. At the conclusion of his paper Dr. Glover summed up the situation thus:—"Enough has been said to manifest the numerous benefits which this Institution has conferred. In its early career it excited a spirit of inquiry, and afforded facilities to students otherwise not easily acquired. Its members took the lead in efforts to improve the education of the poor. The papers and subjects brought before its meetings were frequently of the highest interest, and of great literary and scientific worth. Inventions and proposals of the most essential value to the commercial and mining interests of the district, and to the cause of humanity, originated from the exertions of its members, and were sanctioned and made known by the approval, and diffused by means of the Society. But we can scarcely perceive the thousand almost imperceptible modes in which the operation of this institution has beneficially affected the intellectual, social, and moral state of the district within its sphere. The termination of fifty years has witnessed the fulfilment of almost all the objects contemplated by the author of the prospectus; but the Society is about to enter a new epoch of its existence; and let us hope that the conclusion of the next fifty years may witness the attainment of so many objects as may render the Centenary as auspicious an event as the late Jubilee; so that the progress of the Society during the intervening period may be found to be as great in proportion as it has been in the time already passed."

Whether this pious wish has been answered admits of argument. The changes of the last fifty years have been indeed amazingly great, but some of the principal ones have their roots in the earlier years, although those years were profoundly

unconscious of the fact. When the Duke of Sussex came to lay the foundation-stone of the new building, who thought that the brakesman of a local colliery who, in that very year, bought a piece of land at the Forth and erected a modest manufactory for locomotive engines, was to become more famous, and to do more for the world, than all the peers and commoners assembled to do honour to royalty put together, and with royalty thrown in? Yet so it was. A subsequent chapter will show that George Stephenson was already known to the members of this Society. He was engineer to the Stockton and Darlington Railway Company, and had persuaded them to get an amended Act of Parliament so as to have iron instead of wooden lines, and locomotives instead of horses or fixed engines. He had surveyed and was constructing their line, and was to receive the remuneration of £300 a year.

But railways were slow to reach Newcastle. Upon the 18th June, 1844, the Newcastle and Darlington line was opened, but the northern terminus was at Gateshead not Newcastle, the River Tyne barring further progress. Still it was now possible to get all the way from Gateshead to London by rail, but it was a long business. The writer made what he thinks was the first through journey, the train leaving Gateshead at six in the morning and reaching Euston Square half-an-hour after midnight. The weekly papers went into ecstasies over the extreme rapidity of the transit.

The line could not long be allowed to terminate at Gateshead, "the dirty lane leading to Newcastle," and a *terra incognita* to the Newcastle people. "I hope that you will come to our Gateshead Dispensary ball, Mr. G.," was the request made by a Gateshead belle to a well-known Newcastle lawyer, about the time of which I am writing. "And pray, madam, where is Gateshead?" was the uncompromising reply. Mr.

R. W. Brandling had conceived the idea of a High Level Bridge across the Tyne in 1841; George Stephenson was consulted upon the matter in 1842; the following year a High Level Bridge Company was formed, with George Stephenson and George Hudson, the Railway King, on the committee of management, and with Robert Stephenson as consulting engineer; and then the Newcastle and Darlington Railway Company took the matter up, and in 1845 obtained an Act of Parliament for the construction of the bridge.

George Hudson, then at the height of his fame, was the chairman of that company. In 1844, when the line to the South was opened, he had been extolled in the Newcastle papers as the greatest of benefactors, but the Committee of the Society were afraid of his further extensions, and they tried to discover what his exact aims were. That was by no means an easy task, for deputations failed to see the great man, and he did not answer letters. When at length, after much trouble and by special influence, a reply was obtained, it was to the effect that his operations would be beneficial rather than prejudicial to the institution, and that he should be glad to meet the Secretaries and discuss the matter with them. I find no record of a meeting, but there seems to have been further correspondence, for the Committee were informed that, as the Railway Company would not touch the Society's property, they had no *locus standi* or right to interfere. This common-sense statement had a rather startling effect, for the Committee contented themselves with "requesting the members of parliament for the district to support the bill, especially those clauses which bore on their own particular case."

In March 1846 the first conversazione was held in the Society's rooms, and its success surpassed the most sanguine hopes and expectations of its promoters, and well it might, for

the men who entertained the company were of the race of giants. Mr. Hugh Lee Pattinson, the discoverer of the method of extracting silver from lead, held a scientific levee. Mr. H. G. Potter convulsed his many customers with laughing gas. Mr. W. G. Armstrong (our honoured President) "was galvanizing the ladies—and also the gentlemen." Dr. Embleton, Dr. Bruce, Mr. W. K. Loftus, Mr. W. B. Scott, Mr. John Hancock, and many more, contributed of their best. "We must have another before long," was the constant cry of the delighted members and guests, and another was held in the following October, when "Mr. W. G. Armstrong gave an interesting lecture in explanation of the principles and operation of the electric telegraph, the instrument having been kindly contributed for the occasion by Mr. Allport, Manager of the York and Newcastle Railway." These conversazioni became an annual institution, and such they continued to be for many years. Even yet they are occasionally held, the Mining Institute throwing open its rooms at the same time, and the tale of the last which has been given up to the time at which I write will be told in my concluding chapter. Many of us still look back to the old Lit. and Phil. soirées as amongst the most charming evenings of our lives, but we were young in those days.

All this time the finances of the Society were getting steadily worse. In 1849, the Annual Report showed that the amount due upon mortgage was £6,200; there was a debit balance of £389 9s. 9d. upon current account; whilst for the year then ending only 537 subscriptions were paid. After a long and warm discussion, it was arranged to limit the amount expended in the purchase of books, and thus to materially lessen the expenditure, the money saved going to form a redemption fund. But the regular diminution in the number of members gave the Committee much concern, for the interest must be paid

whether there were more or fewer subscriptions. They proposed to consolidate the amounts due from them, hoping that they might thus get some reduction in the rate of interest. They thought of having a kind of vast reunion, which should be attended by the most eminent literary men of the time, and at which they might open a subscription list for the benefit of the Society. They planned a great Bazaar or Fancy Fair, which should be held in the Library and the Museum, and this idea commended itself to the ladies of the district, who took up the matter actively.

It is strange now to look back to this great attempt, which promised so well but performed so indifferently. The ladies determined that the new Fine Arts Society should have two-fifths of any profits which might be made. The Duchess of Northumberland was to preside at a stall, and the county gentry pressed into the matter with considerable ardour and enthusiasm. Immense exertions were made upon all hands to ensure a success. The Library was mirrored throughout, "and looked like a dream of Fairy-land." In the Museum you might partake of refreshments to the appetising strains of a brass band. The yard was covered over, and a great horticultural exhibition was held in it, to which Mr. Joseph Paxton (who in the following year was knighted in record of his designing the Crystal Palace) contributed that "wonderful plant, the Victoria Regia," then a complete novelty. "Flora and Pomona vied with each other in lending grace and beauty to the Fancy Fair."

It was opened on the 2nd October, 1850, and remained open for three days. It was universally admitted to have been a remarkable success, but it did little towards attaining its object. The total receipts were only £868, and when all expenses had been paid, this Society's share amounted to £420! At the end of that financial year the mortgage debt still remained at

£6,200, and the floating balance against the Society was £981 17s. 11d. Then, by the direction of the Annual Meeting, and "almost as a last resort," the Committee made an appeal to "the Nobility, Gentry, Manufacturers, Merchants, and Influential Inhabitants of the North of England." They briefly sketched the history of the Society, and pointing out how all classes had participated in its benefits, urged that all should join to relieve it from debt. The slight response which their appeal met with grievously disappointed the expectations of the Committee. The position of the Society never seemed less secure than at that moment.

"The darkest hour is that which precedes the dawn." Relief was close at hand, and from such a source as gave it something of a romantic character. The then President of the Society, Mr. Robert Stephenson, had when a youth received great benefit from the Library, and both he and his father had received much help from Mr. Turner, who lent them books and instruments, and gave them valuable counsel. In this hour of deep need, Mr. Robert Stephenson came forward, and, in token of his lasting gratitude, he offered that if before the next Anniversary Meeting, February 1855, the members and other friends of the Society would raise sufficient money to discharge one half of the debt, and if the annual subscription were reduced to one guinea, he would himself clear off the other half of the debt.

It is not easy, even for those who took part in the struggle, to believe that this generous offer met with fierce and powerful opposition. It was accepted at a Special General Meeting held on the 7th of March, 1854, and the task of collecting the necessary funds to secure the gift was set about immediately and earnestly. But those who wished for the freedom of the Society had to encounter a strange amount of hostility, which

showed itself at times in a not too scrupulous manner. The opposition was not numerically strong, but in it were included a few of the active members of committee. They declared that the acceptance of the offer would prove fatal to the best interests of the Society. They would not have the subscription reduced, for then the Institution would become "popular," and "its solid and permanent character" would be jeopardised. Warm language was used at the Society's meetings; strong efforts were made to re-open the question of the acceptance or rejection of Mr. Stephenson's offer; and when the Town Council was asked to contribute to the fund and the question was debated by that body, the Society was bitterly attacked by Town Councillors, who spoke of its operations with that superb confidence which absolute ignorance gives. How many men, then as now, came well within the fiery denunciation of the impetuous Apostle Peter, whose characteristic plain language on this matter of "speaking evil of the things they know not" may be found by the curious in the twelfth verse of the second chapter of his second Epistle. But the ignorant were happily in the minority, and two hundred guineas were subscribed. Still divided counsels were dangerous to success, and the general fund grew slowly, and the required amount had not been raised when the allotted time came. Mr. Stephenson generously kept his offer open. It was freely stated that there were traitors upon the Committee itself, and at a general meeting held in November 1855 a further attempt was made to upset the whole arrangement, but this was defeated by an overwhelming majority. At length, at the Annual Meeting in 1856, it was reported that the necessary amount had been raised, and, upon the motion of the Senior Secretary, Mr. Joseph Watson, to whose strenuous exertions the success of the movement and the defeat of the opposition were in a

great measure due, it was then and there resolved that the subscription should be reduced to a guinea. By the next Annual Meeting the number of members had risen from 506 to 1016, and it continued to increase until, in 1867, it reached 1452, the highest number which it ever attained until the present day.

Joseph Watson was a member of the Society from 1824 until 1874, the year of his death, and took an active and prominent interest in its affairs almost from the first, being a member of the Committee for more than twenty years, and one of the Honorary Secretaries from 1852 to 1860. He was in early life a regular writer for *Tait's Edinburgh Magazine*, to which he contributed (amongst other things) the popular ballad "The Lambton Worm."

The benefactions which the Society was to receive from Robert Stephenson did not end with the clearing away of that incubus of debt under which it had groaned so long. He died in October 1859, and left a bequest of seven thousand pounds "for the general purposes of the Institution, but not to be applied to building purposes, or in aid of any fund for building." Well might the Annual Report for 1860 say, "The Committee are utterly at a loss to find terms in which they may, with any approach to propriety, refer to such princely munificence." In 1851 he had presented to the Society an admirable bust of his father, and at this meeting it was resolved to open subscription lists to procure a similar bust of Mr. Robert Stephenson himself, and one of the new President, Sir William George Armstrong, who had also placed the Society under great and special obligation in the manner which I shall proceed to relate.

When the subscription list was finally closed, the Committee found themselves in the novel and happy position of having a balance in hand, and, as the greatest need of the Society

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was the construction of a new Lecture Room, they resolved to appropriate £150 towards that object. But the many plans suggested agreed in requiring a much larger outlay, and the burnt bairn dreaded the fire. No one could think of again incurring the liability of debt. Again, at the critical moment there was a friend in need. The Report for 1859 states that "Mr. W. G. Armstrong, one of the Vice-Presidents, has intimated that it is his intention to place the sum of £1200 at the disposal of the Committee for the purpose of providing a suitable Lecture Room." The site and plans were to be approved by an architect appointed by Mr. Armstrong, and the Society entrusted the task to Mr. Dobson. After his plans had passed a special meeting of the members, they were accepted by Mr. Armstrong, and the work was carried on so speedily that, in spite of the illness of the architect and the severity of the weather, in 1860 the room was ready for use. The generous donor had then become Sir William, and President of the Society. He wished to have mahogany instead of deal seats, and this with the cost of painting, furnishing, etc., raised the expense considerably above the estimate. Sir William sent the Society a cheque for £1450, which more than defrayed every charge, including the architect's fee.

In this part of the country we are decidedly clannish. We take much pride in our great and wise people, and in our institutions. We speak of them with the familiar abbreviation which, in itself, implies affection, but which has certain drawbacks. I remember a staunch Newcasseler holding forth to a party of Southrons in London, and constantly quoting or instancing "Sir William." His audience was evidently puzzled, and astonished and somewhat annoyed the speaker by inquiring whether he meant "Harcourt" or "Alexander." To him our "Sir William" was *der Einzige.*

And so with our Society: it has always been "the Lit. and Phil."; nothing more. A gentleman coming to lecture to us stayed at the Neville, now the County, Hotel, exactly opposite the Central Station. Wishing to view the scene of his rhetorical efforts beforehand, a cab was called for him, and he told the driver to take him to the Literary and Philosophical Society. The cabman had never heard of such a place, and when boots was applied to, he was equally ignorant. To the lecturer's amazement and alarm the landlord himself could throw no light upon the matter. Now, although he had never before been in the town, the lecturer had many Newcastle friends, and he chanced to say to himself, as it were, "Well, this beats everything: not one of them knows where the Lit. and Phil. is!" Then was there light in the darkness, and a great chorus arose, "The Lit. and Phil., sir? Why did you not say so before? Why, it's there!" And there, close to, it was.

But to return to the Society. With its liabilities discharged, its roll of members largely increased, and its Lecture Room enlarged, it went on its useful way without any great change until the Railway Company did what the Committee, forty years before, had seen that it would one day do, and obtained parliamentary powers to take the Natural History Society's property, and to interfere with our yard and building. One of the Secretaries conceived the idea that the Society and the Company might come to an amicable arrangement which should be mutually beneficial, and proposed that the Company should, in exchange for the Society's yard, give an equal quantity of the land which it had just purchased on the south of our existing building, and should also pay to the Society such a sum of money as would enable it to extend its buildings, greatly increasing the size of the Library proper, and the general accommodation of the Institution. This idea was accepted by the

Company, Lord Armstrong taking an active part in the negotiations, and advising upon the further conditions which were necessary to diminish as much as might be the noise which would inevitably arise from the shunting of trains and the regular work of a great station. The necessary formalities were soon gone through, the new building erected, and many alterations made in the roof and windows of the old building. The Society has by this transaction gained a larger library, a handsome smoking-room, lavatory accommodation, and cellarage sufficient to house its electric lighting apparatus, and it has now its own complete electrical installation.

The new building was opened in May 1889, and the Society then seemed to be fully equipped for a long career of extended usefulness. Never did its rooms look more charming, never did its perennial youth seem more fully renewed, than on the evening of February 7th, 1893, when it was thronged by a brilliant crowd of members and friends who had gathered to celebrate the centenary of its existence. The next morning it was in ruins. This tale of destruction I shall relate in my concluding chapter.

CHAPTER VII.

MONTHLY MEETINGS.

IT has already been fully explained that the principal idea which Mr. Turner had in his mind when he suggested the formation of the Literary and Philosophical Society, was that of establishing a conversation club which should, in his own words, "provide an easy method of spending the evening agreeably and usefully." He intended the members to meet for the purpose of exchanging views upon literary or scientific matters, and that those who might have special information upon the topic of the evening should bring it before their fellow-members by the reading of a paper prepared with that object. The meetings at which such papers should be read would be held once a month, but there was to be no stated cessation in the informal talks which went on in the intervals.

The proposition was a half-baked one. A few friends had been in the habit of coming together and talking matters over, and they now thought that they would enlarge their borders. But such an enlargement means an entire alteration, and although the monthly meetings of the Society became of much importance, they never seem to have been such as were contemplated by Mr. Turner, a blend of essay club and debating

society. They soon settled down to serious business, and this district owes much to the invaluable work which was done at them.

Although there was naturally much formal business to be gone through at the early meetings of the young society, at an adjournment of the very first, held on the 12th March, 1793, one of the resolutions passed was—

"That any papers which, having been submitted to the Committee through the hands of the Secretaries, shall receive the sanction of any three members of it, may be read at the general meetings of this Society."

The general meetings of the Society were to be held on the second Tuesday in every month, the chair being taken at a quarter before seven, "but the Members are requested to meet at half-past six, to hear such literary intelligence, etc., as any person may have to communicate." At the adjournment of the first meeting which I have mentioned, no sooner was the rule passed than "two papers, one on the Cultivation of Taste, the other on the Study of the Classics, were handed to the President, and the meeting (wisely) adjourned."

But think of the men who had papers with such portentous titles already prepared! How strange and improving a sound it all has! As we turn over the earlier contributions, we expect to come upon essays on "Friendship," "Truth," "Was the execution of Charles I. justifiable under the circumstances?" and the like. But we are pleasantly disappointed. The meetings, from the first, were serious and valuable opportunities for advancing matters of real importance. The thoughtful and studious members of the community took advantage of the facilities offered to them. They drew together with the direct object of communicating to others and learning from others in the true spirit of the wise words, "he that watereth

shall be watered himself." The general or monthly meetings were not only times when scientific observations, and the results of research and experiments, were brought forward, explained, and discussed, but they had also an immediate and important influence upon the entire district, and upon the social and intellectual advancement of Newcastle.

How and why this was the case, the wide extent of the interest excited, the practical character of the work done, and the instant appreciation and successful carrying out of Mr. Turner's idea, will probably be best seen by my giving some account of what actually took place at the monthly meetings held during the first year of the Society's existence, following that in March to which I have already alluded.

At the meeting in April, "a letter was read from M. Norberg, an eminent Swedish naturalist, to Matthew Anderson, Esq., on the discovery of a species of air, possessed in an extraordinary degree of the property of exciting and maintaining combustion." This is the entire record. We should have been glad of something more. The essay upon "The Cultivation of Taste," by the Rev. Dr. Enfield, which I have mentioned before, was also read. It is sufficiently elegant and insipid. A dozen of such effusions would have killed this or any other Society.

Mr. Matthew Anderson communicated in May "an account of the production of an extraordinary degree of cold by the mixture of snow with the caustic vegetable alkali crystallized by a peculiar process." A letter was read on the present state of the settlement at Port Jackson, which had just been called into existence, the first cargo of criminals having been shipped off to Botany Bay in the year 1787. What course the discussion upon this letter took we do not know, but how little those who felicitated themselves upon having found a convenient locality for the deportation of law-breakers dreamed of the great colony

of New South Wales which they were founding, and its splendid capital city upon the sea.

This meeting closed with an essay on the Study of the Classics.

In June the members enjoyed what is described as "a very curious paper entitled 'Conjectures on Light, considered as an object of Chemistry,'" by the Rev. Dr. Thorburn, of South Shields.

We English folk were hard at work, towards the end of last century, possessing ourselves of places where we could dispose of the inconvenient part of our population. Sierra Leone offered many special advantages for the attainment of this object. In 1786 the streets of London were thronged by free blacks who had inconvenient views of *meum* and *tuum*, and the directors of the Sierra Leone Company ceded a considerable district of land for the purpose of being colonised by these freebooters. A free negro settlement was to be formed in that region so deadly to the white man. Five years afterwards the directors of the Sierra Leone Company applied to the Government for a free passage for the Nova Scotian Africans, the negroes who had remained loyal to England during the American war, and who had emigrated to Nova Scotia, which was an altogether unsuitable locality for them. In March 1792, 1,131 out of the 1,196 who had sailed from that far northern region landed at Sierra Leone, but found scarcely any of the London emigrants remaining, and in half a century nearly all of the new-comers had disappeared. It is not for me to describe the accumulated miseries under which they suffered, but we find that, at the July meeting in 1794, the attention of this Society was turned to the matter, and letters were read upon the present state of the settlement at Sierra Leone. These were written to Mr. Turner by the Reverend Thomas Clarkson, for thus the first

Report of the Society styles him, but the noble old Abolitionist had but little claim to the title, which he would have heartily disliked.

There was certainly no lack of variety in the subjects introduced, for there were communications to this same meeting respecting a discovery of four ancient pigs of lead, and also on some remains of antiquity in Cumberland and Westmoreland.

In August various specimens of tradesmen's tokens, which, from 1648 to 1672, they were permitted to issue as small coin, were exhibited; King James the Second's gun money, eight half-crowns of which were not intrinsically worth twopence, and the promissory half-pence then in circulation, were also shown; and a paper was read upon private coinages in England.

Mr. Turner read a paper, in September, upon the lead-mine district in the northern counties, with observations on the practicability of continuing a section of the strata from sea to sea; and in the following month there was a paper on the aerated barytes, with an inquiry whether it had yet been found in the northern lead-mines. An essay was also read on the phenomena of heat extricated in various chemical mixtures, with an attempt to apply them to the correction of the existing tables of elective attractions.

The November meeting opened with the inquiry, by Dr. Enfield, whether there be any essential distinction between poetry and prose. The question is always turning up, and is probably unanswerable except in respect of minor details. The best reply I know is that which was made to me by a little girl to whom I put a similar question, "Please, sir, in poetry you may use bad grammar, but in prose you mayn't."

This barren quest was followed by the reading of a correspondence with Sir John Sinclair on the objects of the Board of Agriculture, which had been established in 1793, and which had

drawn up a series of questions to be answered by practical agriculturists in different parts of the country. The Committee had taken steps to ensure the circulation of these queries in this district, and the meeting approved their action.

The consideration of Mr. Moises' proposal for a general library occupied most of the time of the two following meetings, yet opportunity was found, in December, for a memoir on the circulation of the air in mines, which was translated from the French; and in January, a tribute to the memory of Robert Watson, artist, philosopher, and military and civil engineer, who, son of a porter and born in the Flesh Market, died of fever in India when but twenty-eight years of age. He had already distinguished himself in the defence of Fort Osnaburgh, but he died too young for the enduring fame which at one time seemed to await him.

The final meeting of the first year of the Society listened to an essay upon "the production of the hydro-gene and carbonic acid gases, or the fire and choke damps in coal-mines." This was evidently felt to be of importance, for it was ordered to be read again and more fully considered at some future meeting.

Now I have gone through each item of the bill of fare, and I submit confidently that it was a right and rare good one for the first year of a new talk-society. There is not only much in it which is well calculated to awaken interest and to promote and encourage inquiry, but also much which directly appeals to the actual needs of the district. How quickly and thoroughly that hackneyed didacticism, which is the beginning and the end of most essay societies, was overgrown and destroyed by actual and living thought and observation bearing immediately upon real life.

It would occupy too much space if I were to attempt to give any account even of the principal papers which have been

brought before the Society at its Monthly Meetings, but we find with much interest how they dealt from the very first with the whole of the subjects which may be considered as peculiarly belonging to this district. At the time of its birth this Literary and Philosophical Society stood alone. There was none other anywhere within a day's journey to which inquirers, observers, or thinkers, could make their thoughts, observations, or inquiries known; and thus we find among the communications many upon improved methods of agriculture; upon matters of interest connected with coal, lead, and iron mining; upon commercial chemistry, fisheries, and navigation; and learned dissertations upon the meaning of the inscriptions upon stones dug out of the Roman Wall.

We should expect to find the papers upon coal, coal-mines, and coal-mining the most numerous of all, and such was the case. We have seen that at two meetings, in the first year of the Society's existence, the subject of the air and gases in coal-mines had been brought forward. In December 1794, the indefatigable Mr. Turner proposed that queries respecting the natural history of coal should be circulated. He prepared a paper containing twenty-two questions, and after they had been submitted for the approval of several gentlemen connected with the direction of "Coal Works," they were printed and circulated. They dealt with the original formation of coal, with its position relatively to its accompanying strata, its thickness, dip, dykes and troubles, and the like; inquired into the nature and constitution of such troubles, and the manner in which they affected the adjacent coal; asked about fossils, calcareous stalactites, whin, quicksands, water, foul air, etc.; suggested that, where permissible, the means for overcoming difficulties, and the nature and construction of any special machines, should be described; and they concluded with the query, "Are you

disposed to favour with your assistance any attempt to form a Vocabulary of the Technical terms in use amongst practical miners, particularly in the Coal Works?" The letter which accompanied the questions explained that the idea of the Committee was to obtain materials for illustrating the Natural History of Coal, as well as for the construction of a mineralogical map of the northern coal district.

So far as this district was concerned only two gentlemen replied to the queries, and they gave the desired information respecting the Pontop Pike Colliery and the Montague Mine Colliery, both in the county of Durham. But Mr. Matthew Boulton, partner, at the Soho Works, Birmingham, of the great discoverer James Watt, had a special interest in the matter, for the new steam engine which they were turning out was beginning to be of great service in pumping, sinking, and working mines generally: it was in fact to revolutionise coal-mining, as it revolutionised every other manufacture dependent upon the use of coal. We are therefore not surprised to find that Mr. Matthew Boulton sent answers to some of the questions, and we may guess that they were those which specially related to machinery. The only other person at a distance who took the trouble to reply was Mr. Gervase Bourne, of Eastwood, in Nottinghamshire, and he accompanied his communication with copious lists of borings in various parts of England, and a valuable collection of specimens illustrative of the stratification of the coal district in Derbyshire and Nottinghamshire.

In remarking upon the slight local response to their invitation, the Committee wisely observe that "The evils which arise from the want of a due application of the principles of science to a well-digested collection of the facts which at present remain, detached and scattered, in the possession of a few individuals, are too frequently and fatally evinced by the dread-

ful accidents which happen from the generation of damps, from ignorance of the best methods of correcting or expelling them, from the inattention of our predecessors to the regular delineation of the fields of coal they wrought, and the consequent wastes they have left, and from various other causes."

This great question of coal-mining having once been taken up by the Society, it continued to make its appearance at brief intervals. There was a strong feeling that there should be more organised effort, and that the true interests of the trade would be best consulted by the closer communication and association of those interested in it. In September 1796, Mr. William Thomas, who was himself engaged in connection with the trade, was induced, in consequence of an accident occasioned by the pricking of an ancient waste filled with water, at Slatyford in Northumberland, by which six persons lost their lives, to bring forward the question of association. This he did in an important and valuable paper entitled "Hints for the formation of a plan to be proposed to the Coal Owners for establishing an office in Newcastle for recording various important information respecting the Coal Works and Wastes in this neighbourhood." It aroused much interest and attention, and the meeting resolved, "That this Society doth very highly approve the benevolent and liberal spirit which dictated the above plan; and that an open Committee be held at this place, to which those members who are concerned in the Coal Trade be particularly invited, on Saturday, the 24th inst., at eleven o'clock, for the purpose of further considering this plan, as well as the propriety of submitting it to the Coal Owners for their adoption."

The meeting was duly held; several coal-owners attended it; and Mr. Thomas was requested to revise and re-model the plan before it was brought under the notice of the Coal Trade

generally. But other things pushed in and claimed prior attention. The whole matter stood over until June 1815, when—in consequence of the falling in of several old and forgotten shafts at Heaton Main Colliery, which had become filled with water, seventy-five persons and many horses lost their lives—the paper was again brought before the Society, and was ordered to be printed. But the "benevolent and liberal proposal" was coldly received, and the proposer was to pass away, and thirty-seven years to go over, before, in the formation of the Mining Institute in 1852, his dream was realised.

This paper seems to me to be of sufficient interest to warrant my printing it *in extenso* in an Appendix to this book.

Mr. Thomas was a valued member of the Society, and took an active interest in it from the first. He was one of those men who are filled with ideas. He was largely instrumental in drawing up the questions I have mentioned, and in 1805 he brought before the Society "Observations on the Propriety of introducing Roads on the principle of Coal Waggonways for the general Conveyance of Goods; with a particular reference to shewing the Practicability of a Road on this principle from Newcastle to Hexham." Unfortunately no notice of this paper appeared in the local press, and the author's engagements were too numerous to permit him to devote the time required for carrying the idea practically into effect. In their report presented in 1825 the Committee lament his death, and, in justice to his memory, record that "the projects of this kind which are now so numerous owed to him the first idea of them."

All new inventions connected with the coal-trade in its many branches came for several years before the Monthly Meetings, and were often illustrated by drawings, the production of specimens, or the exhibition of apparatus. Improved methods of drilling and preparing for blasting, the treatment of water in

mines, fresh methods of ventilation, novel forms of gin, and the like, were in turn discussed. And, before the August meeting in 1812, was laid a drawing of a lamp which Dr. Clanny of Sunderland proposed to make, with the object of preventing the fatal effects of explosions in coal-mines. I may just mention, *en passant*, that it is curious and interesting to note that Mr. Turner gave to the October meeting in the same year "an account of the moveable Steam Engine lately introduced in the colliery at Middleton, near Leeds." This was the Blenkinsop engine, which was soon after introduced at the Kenton and Coxlodge collieries, where George Stephenson saw it at work drawing seventy tons of coal in sixteen chaldron waggons at the rate of about three miles an hour, and quietly remarked that "he thought he could make a better engine than that, to go upon legs."

At this time men's minds were peculiarly turned to the subject of explosions of fire-damp in pits. Such lamentable occurrences were sadly common and destructive, the Felling pit explosion in that very year, 1812, alone causing the death of ninety-two men and boys, and a second explosion at the same place in the following year carrying off twenty-two more victims. The only artificial illuminant was the tallow candle, and it was actually in use for testing the presence of fire-damp. Amongst many abortive schemes to procure safety, the lamp which Dr. Clanny invented, and completed in 1813, stands out as the solitary success. It became a great favourite with the pitmen, and though too unwieldy to become of universal use, the inventor improved it much as years went by, and it was certainly the first really in the field. In 1816 he received the silver and gold medals of the Society of Arts for a steam safety-lamp, which was an attempt to construct a safety-lamp on a different principle from that on which his first lamp or the

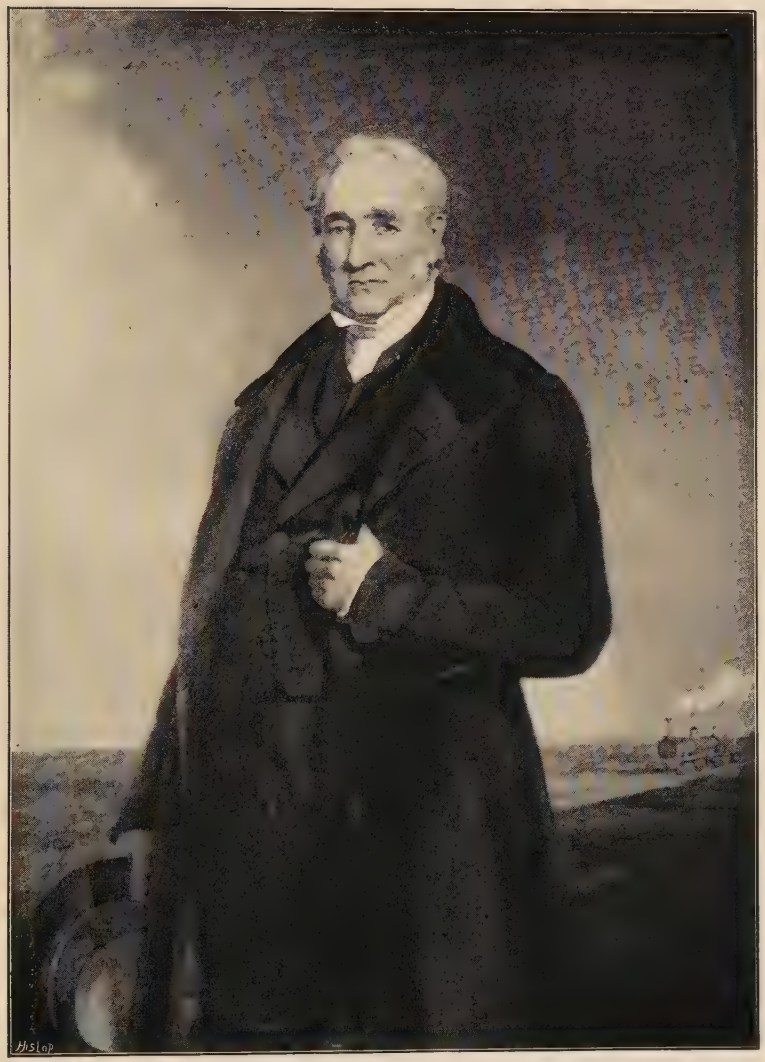
Davy lamp was constructed. He presented his original lamp to this Society in 1822.

The coal-owners of the north, headed by the Marquis of Londonderry, presented Dr. Clanny, in 1848, with a piece of plate "as an acknowledgment of his eminent services in the cause of humanity and science." But they had not been fully satisfied with the Clanny lamp when it was submitted to them in 1813, for the Committee who examined it, and who were expressly associated together for the purpose of investigating the causes of explosions and the best method of preventing them, afterwards specially invited Sir Humphrey Davy down to advise and assist them in their labours. Upon the 24th August, 1815, he visited certain of the collieries near Newcastle, and upon the 9th November of that year he read to the Royal Society a paper "On the Fire-Damp of Coal Mines, and on Methods of Lighting the Mine so as to prevent its Explosion." Dr. Clanny, not unnaturally, believed that the "Davy" was but a pirated copy of the "Clanny," and there is now little question that, in many respects, the "Clanny" was the better of the two.

Our Society was to have an honourable share in this important life-saving contest. George Stephenson was at this time engineer at Killingworth Colliery, and was busily employed in improving his locomotive engine, which had made its first essay in running in the preceding year, 1814. But he had also for several years been considering the best way of fighting against fire-damp, and, as the busy man has the most time, he got his friend Nicholas Wood to draw out a lamp, which he (Stephenson) had thought out as being well adapted to resist explosions, and it was also, with the same friend's assistance, actually constructed. Then, on the 21st October, the very night upon which it was received from the makers, George Stephenson,

Nicholas Wood, and Moodie, a hewer, went down the Killingworth pit, and made their way into one of the most dangerous places. They boarded up part of the gallery into which the death-bearing gas was escaping with a loud hissing noise. There they waited until Moodie said that enough had collected to make an explosion certain if a naked candle were introduced. And then, his chosen friends warning him of the probable consequences, and taking refuge in a place of safety, George Stephenson advanced alone with his lighted lamp and held it up, fully exposed to the force of the deadly blower. Was it the act of a madman or a hero? As the world judges, that question was to be decided by success or failure. But George Stephenson's faith was justified. If he were wrong, he well knew the penalty and was ready to pay it; if right, he was the saviour of his fellows. And he was right. The flame darted up as the dread agent reached it, then flickered, then died out; and the safety-lamp was an accomplished fact.

But George Stephenson made many improvements upon his original invention. A second lamp was tried on the 4th November, and a third on the 30th of the same month, both being experimented with before either George Stephenson or his friends had heard that Sir Humphrey Davy was at work in the same direction. In this year (1814) Nicholas Wood became a member of the Literary and Philosophical Society. In some way, possibly through him, Mr. William Turner had become interested in George Stephenson, and thus it came to pass that some of his experiments, at all events, were made with apparatus belonging to the Society, and advice and aid were freely given him by our excellent Secretary. Mr. Stephenson never forgot this, and in after-life he said, "Mr. Turner was always ready to assist me with books, with instruments, and with counsel, gratuitously and cheerfully. He gave me the most



GEORGE STEPHENSON.

valuable assistance and instruction, and to my dying day I can never forget the obligations which I owe to my venerable friend."

We are not then surprised to learn that, at the Monthly Meeting held on December 5th, 1815, "a paper was read, transmitted by Dr. John Murray of Edinburgh, on an Improved Lamp for lighting Coal Mines, with a drawing. The Lamps also of Dr. Clanny, Mr. Brandling, and Messrs. Stephenson and Wood, were exhibited, and experiments performed with carburetted hydrogen gas, to prove the safety of the latter." But Mr. Samuel Smiles, in his *Lives of the Engineers* (vol. iii., p. 119, Ed. 1862), has given so graphic an account of this very meeting that I may be pardoned for reproducing it.

"Mr. Stephenson was at that time so diffident in manner and unpractised in speech, that he took with him his friend, Mr. Nicholas Wood, to act as his interpreter and expositor on the occasion. From eighty to a hundred of the most intelligent members of the Society were present at the meeting, when Mr. Wood stood forward to expound the principles on which the lamp had been formed, and to describe the details of its construction. Several questions were put, to which Mr. Wood proceeded to give replies to the best of his knowledge. But Stephenson, who up to that time had stood behind Wood, screened from notice, observing that the explanations given were not quite correct, could no longer control his reserve, and, standing forward, he proceeded in his strong Northumbrian dialect to describe the lamp down to its minutest details. He then produced several bladders full of carburetted hydrogen, which he had collected from the blowers in the Killingworth mine, and proved the safety of his lamp by numerous experiments with the gas, repeated in various ways; his earnest and

impressive manner exciting in the minds of his auditors the liveliest interest both in the inventor and his invention."

There soon arose a long and bitter controversy as to with whom the honour of having invented the safety-lamp should rest, Sir Humphrey Davy or George Stephenson, the world-renowned scientist or the Northumbrian pitman. Those who are curious in the matter can find volumes of letters and pamphlets, upon both sides, carefully preserved amongst the archives of the Society. There is much bitterness, wrath, and evil-speaking; some indignation on the part of some wealthy and educated persons at the presumption of an ignorant rustic; much written with reference to each of the great men which the writers probably lived to be heartily ashamed of. Perhaps our Society did actual justice when, in 1818, it elected both inventors as honorary members, but placed George Stephenson the first.

Long years after this found Dr. Clanny still at work upon the safety-lamp. In 1844, Dr. Glover described an improvement which his friend had made on the ordinary form of the Davy lamp, and, the Committee say, "as every Lamp invented by parties in this neighbourhood has at one time or other been brought before the Society, it may not be out of place to state the alteration suggested by Dr. Clanny." He proposed to use the gauze for the admission of air only, and to have glass for the transmission of light. The lower part of the lamp was of the usual construction, the upper part being a cylinder of wire gauze sufficiently fine to prevent the passage of flame. Beneath this was a cylinder of glass, within which the flame burned, and through which the light was transmitted.

There was much discussion upon this project, and many were the objections made to it. Mr. H. Smith, of the High Bridge, Newcastle, produced a combination which he had made

of the Stephenson lamp and the Davy lamp. "Stephenson's Lamp as now made consists of a cylinder of glass fitted to a brass bottom of the same construction as the ordinary Davy Lamp; outside the glass cylinder is one of wire gauze similar to that of the Davy Lamp; and the air is admitted by means of small holes in the brass bottom of the Lamp. In Stephenson's Lamp, from the small quantity of air admitted, the light is too easily extinguished by a current, or fall, or other similar casualty. The principal improvement in Mr. Smith's Lamp is that the holes for the admission of air, after many experiments, have been so apportioned that the flame of the Lamp would not go out until the air had become so foul that a man could not continue in it and live. Another advantage of this Lamp is that, if by a fall or otherwise the glass should be broken, it would still be a Davy Lamp." Even Dr. Glover dreaded the liability of the Clanny lamp to accident, and proposed to add a cylinder of mica within the glass. But, after all, "the proof of the pudding is the eating," and Dr. Clanny received a letter from Broadsfield Colliery, Staffordshire, which stated that his lamp had been found better in that colliery than any other, that the workmen had never refused to work with it on account of any deficiency of light, and that it had proved safe in every instance."

There is scarcely a report of the Society's operations which does not show how much care and thought were bestowed at its meetings upon coal and coal-mining. There was not one of the great men who made that industry what it is to-day who did not appear before it as the reader of a paper or the candid critic of his friend the reader. Of Mr. Nicholas Wood, the first president of the North of England Institute of Mining Engineers, chairman of the Coal Trade Association of Great Britain, and Fellow of the Royal Society, I have already spoken,

but I might have mentioned Mr. John Buddle, Mr. Barnes, Mr. Matthias Dunn, and many another well-remembered name. In the annual report presented in 1816 the Committee truly say, "Discussions have originated, or have been promoted in this place, which have materially contributed to arouse the attention of the scientific world, and to lead to results which promise the most extensive and durable benefits to the community;" they further speak of the "aid given by the co-operation and experience of the principal viewers, and of others intimately conversant in all the details of mining concerns;" and they add, "it is most satisfactory to see that on this highly interesting subject, public curiosity has been powerfully and universally awakened."

When the Natural History Society began its operations in 1830, a special effort was made "to obtain the support of the mining proprietors of the district." It was proposed to make an extensive public collection of specimens illustrative of the sciences of Mineralogy and Geology. It was also suggested that the new Society should be made "the place of deposit for information connected with the collieries, by the formation of general plans, which shall at once show the extent and position of the old workings in each seam."

From this time I find fewer papers upon coal and coal-mining read at the monthly meetings of this Society, but they do occur from time to time, the last apparently being in September 1848, and a communication from Birmingham upon a new form of safety-lamp. I have already mentioned that the North of England Institute of Mining Engineers was formed in 1852.

Our Society was fortunate in having amongst its most active members some of the most famous men connected with lead-mining in the North of England, and they brought before the

monthly meetings the results of their observation and consideration in many directions. I may specially mention Mr. Hugh Lee Pattinson, the inventor of the well-known process for extracting silver from lead, by which, for a long succession of years, not less than 200,000 ounces of silver, which previously had been thrown away, were annually saved. He was a fellow of the Royal Society, and took a great interest in this Society, of which he was one of our vice-presidents when his death occurred in 1858. I must also mention Mr. Thomas Sopwith, eminent as a civil engineer and a geologist, standing in the very first place as manager of lead-mines, a successful road and railway engineer, fellow of the Royal and many other learned societies, the inventor of a multitude of useful drawing instruments, the author of a host of books and essays, and withal a bright, genial, and true-hearted Northumbrian bred and born. Both of these gentlemen will reappear frequently in my narrative.

I need not go into much detail upon the other subjects which, in the early days, were regularly brought forward, and as a matter of course, at the monthly meetings, but which now find a more certain audience in some society which devotes its whole attention to study and observation in their special directions. Next to mining, the most prominent feature for the first quarter of a century was the number and importance of the papers upon agricultural subjects. "The use of lime in Agriculture," by the Rev. James Thorburn, M.D., of South Shields; correspondence with the Board of Agriculture, which was instituted in the same year as this Society, and discussion and circulation of the queries which it printed with the object of correctly ascertaining the existing agricultural conditions; "The size of Farms;" "Improved methods of cultivating Peaches and Nectarines;" "The importance of elastic gases

in the process of vegetation, with an application of these principles to the management of Fold-Yard Manure," by Dr. Fenwick; "Reflections on Calcareous Manures," by the same gentleman;* "The best method of taking up from, and laying down, land to Grass," by Mr. Joseph Atkinson of Swarland, who received the silver medal of the Board of Agriculture for this paper; these were amongst the earliest matters brought forward. Some of these papers, as well as some of those which appeared at later stages, were subsequently produced in pamphlets or magazines, and they aroused no little controversy. At times the local weekly press teemed with correspondence upon controversial points contained in them, and even the great London papers deigned to notice their arguments pro and con. The Society thus fulfilled the most important of the objects of a Farmers' Club.

Again, the antiquities of the district came in for a large share of attention. I have mentioned that in June 1794 a paper was read by Mr. J. R. Wilson on two stones, with inscriptions, which had been lately dug out of the Roman Wall near Walbottle, and which were presented to the Society by Mr. Charles Nixon. Where are those inscribed stones now? They are only the first of quite a considerable number of similar objects of vast antiquarian interest presented from time to time to the Society, but not one of which is now in its possession; and yet such stones have neither legs nor wings. It is perhaps not too much to say that there was scarcely a discovery of Roman remains during the first twenty years of the Society's existence which was not communicated to the members at a monthly meeting.

* These essays were afterwards reprinted by Mr. Young in his *Annals of Agriculture*, and also, but without acknowledgment, by Dr. Hunter in his *Geological Essays*.

I have said enough to show that these meetings were seasons of much interest and instruction. They were, in fact, the precursors of all the learned Societies in which our city is now so rich. Their width of range and great variety of subject, and the high local value which we may properly attach to them, will be best seen by some further account of certain of the matters with which they dealt.

Let us take a few examples. Before 1801 there was no official census of the population of the United Kingdom, but in 1795 there was a proposal made to a monthly meeting that an attempt should be made to enumerate the inhabitants of Newcastle and Gateshead. A Committee was appointed to draw up a report upon the best method of procedure. There was a strangely strong feeling, it would be scarcely too much to say a strong religious feeling, against anything of the kind. No actual steps were taken with the view of really carrying the project into effect, but the Committee reported in due course on January 12th, 1796. They suggested that the town should be divided into districts, which should be assigned to such members of the Society, and other respectable inhabitants, as might volunteer for the purpose. Some days before the inquiry was actually to commence, a printed address was to be delivered to every family in the town stating the objects with which the inquiry was made, and setting out the questions to which the heads of families were invited to reply. In this manner the Committee conceived that the enumeration might easily be completed. But "it is to be lamented that a sufficient number of persons did not offer their assistance to encourage the execution of the plans; which might, in that case, have furnished a model for a more complete National Enumeration than afterwards took place under the Authority of Parliament."

I note that in April 1801 Mr. Turner read "some observa-

tions on the lately completed enumeration of the Towns of Newcastle and Gateshead, particularly on the deficiency in the total result, and the great disproportion between the sexes; as well as on the omission, in the plan prescribed by the Act, of many enquiries which would have been highly useful to the philosopher and political arithmetician."

Let us turn to another question which was brought before the monthly meetings, and with which some attempt was made to deal practically: I allude to the state of the poor amongst us. It is difficult for us really to appreciate the terrible immediate effect of the marvellous inventions of the last quarter of last century upon the working people in our large towns. This effect showed itself with the greatest clearness in the concluding years of the eighteenth and the opening years of the nineteenth centuries. Those inventions had wrought a mighty change, which, like most changes, had its evil as well as its good side. Numbers of men found themselves thrown out of employment. Wages fell, rents increased. For the first twenty years of this century the price of wheat was, on the average, 98s. 6d. per quarter. Population grew with startling rapidity. Diseases, which are now scarce and greatly reduced in danger and severity, were rampant. The law was bloody in the extreme. Flogging, the stocks, the pillory, hanging, gibbeting, were still frequent punishments, the penalty of death being exacted for innumerable trivial offences. Society made men brutes, and punished them because they were what it had made them. The law was against the poor: the State and society were against the poor: then, as always, "the destruction of the poor (was) their poverty."

In 1797 the state of the poor, especially in Newcastle, was brought before the Society, and assuredly not before time. The *Monthly Magazine* stated that it was shown on this occasion

that the sum raised for the support of the poor of that town from September 1796 to September 1797 amounted to £10,000. "Notwithstanding the expenditure of this large sum, the streets of Newcastle are said to be more encumbered with common beggars than almost any other town in the kingdom." I must not dwell further upon the wretched state of the poor, or upon the hopeless and evil ways which were taken for its relief until, at length in 1834, the Poor Law was reformed, and it was thenceforward no longer true that "the whole character of the people was lowered by the admission that they had a right to relief independent of work." The matter was introduced to the November meeting in a paper by Mr. Clennell, which was read again at the meeting in December, when it was resolved to appoint an open Committee, which should meet every Monday evening at five o'clock, for the purpose of collecting information on the subject of making provision for the poor.

Closely connected with the better provision for the bodies of the poor was that of better provision for their minds. We were contented to lag far behind other civilised peoples in the matter of education. "It is difficult to conceive," says Mr. Porter in his *Progress of the Nation*, "that any nation calling itself civilised, and boasting itself to walk in the light of Christianity, could have so neglected the all-important subject of education, as did the rulers of England up to the beginning of the present century." There were, indeed, parochial charity schools, in which "the little that was taught had nothing in it which was useful;" Sunday-schools had recently been started, but had made, as yet, little progress; Joseph Lancaster had begun, in a humble and tentative way, his grand work of primary school teaching in 1798; and Dr. Bell had started his great scheme in a similar direction when this century entered upon its course.

But it was not until 1839 that a Board of Education was formed. It was to consist of five Privy Councillors, over whom the President of the Council was to preside. To this Board was to be entrusted the distribution of such a sum as should be voted by Parliament for the promotion of education, and it was specially charged with the formation of normal schools. The House of Commons resolved, by a majority of two, that £30,000 should be put at the disposal of this Board, but the House of Lords, on the motion of a learned prelate, carried against the Government, and by a majority of 111, an address to the Queen, praying her to revoke the order in Council by which the Board of Education had been appointed. The Government, happily, went quietly on with its plans, and left the House of Lords lamenting.

But more than a quarter of a century before this had the education of the poor claimed the close and frequent attention of this Society. It appears to have been brought forward, in the first instance, by Mr. James Graham, of Berwick, in an essay read at the monthly meeting in June 1806. The following month "the subject was again taken up by Mr. Isaac Richardson, who read an Essay on the Propriety of introducing the Mode of Instruction proposed by Dr. Bell and Mr. Lancaster." In June 1808 the Committee advertised thus:—"Education of the Poor. A Paper having been read at the last monthly meeting of the Literary and Philosophical Society, recommending a more effectual attention to the Education of the Poor, it was deemed expedient to renew the consideration of this very important subject at their next meeting on July 5, when the Committee request a full attendance, as it is expected that some Proposals will be laid before the Society on the best mode of introducing into this Town some mode of Education on the plan of Dr. Bell and Mr. Lancaster." Mr. Isaac Richardson at this meeting

again brought the matter forward, and the next Report says: "In consequence of this, a number of individuals, as well members of the Society as others, joined in a respectful application to the Corporation for their countenance and support in so laudable an undertaking; and the Committee have the satisfaction of reporting that the Mayor and Corporation have publicly advertised their intention to bring forward a plan for this important purpose."

This movement proved to have been peculiarly opportune, for when George III. attained his jubilee in 1810, although the event was celebrated with the time-honoured swilling and guzzling which are, in our favoured land, the outward and visible signs of inward and abiding rejoicing, some sober-minded people ventured to think that something more might be attempted. And thus arose the Royal Jubilee School in this as in many another town, where a little (very little) free education might be given to the children of the poor. The foundation-stone was laid, and the School was built in commemoration of the fiftieth anniversary of the accession of George III. That respectable but limited monarch had said, "May every poor child in the kingdom learn to read the Bible." It was something, however little, in the right direction. The school built to fulfil this wish soon grew and widened its curriculum, and it continued to do a useful work until the passing of the Education Act in 1870 made a national system of education a possibility, when it became the property of the School Board.

But these beginnings of primary education are so interesting and of such importance that I must show a little more precisely what our Society did, at Mr. Isaac Richardson's instigation, to aid the valuable movement. The resolutions passed are worth recording:—

"1. That the establishment of a general institution for the education of the poor agreeably to the plan of Dr. Bell and Mr. Lancaster is a measure which it is highly expedient should be adopted in the town of Newcastle-upon-Tyne.

2. That from the printed Regulations it appears that in the charitable institutions in Newcastle for the education of the children of the poor, 358 Boys and Girls receive weekly instruction in reading, writing, and the first rules of arithmetic (and the Girls in sewing and knitting), and that about 750 other children are taught to read and taken to places of public worship on the Sundays.

3. That the probable amount of children under fourteen years of age is not less than 5600; perhaps considerably exceeds this number—that of course, after every reasonable deduction for the numbers above mentioned, and also for children educated at the expence of their parents, a large proportion of the population of this town must remain without education.

4. That a letter be respectfully addressed to the Mayor and Corporation in Common Council assembled, submitting to their consideration the above-mentioned facts—and requesting that they will be pleased to call a general meeting of the inhabitants, for the purpose of considering the best mode of providing for the establishment of a general scheme for the education of the children of the poor.

5. That the next meeting of the Committee (on Tuesday, July 12) be an open Committee, which any of the members who are friends to the proposed institution are requested to attend."

Mr. Isaac Richardson has long since passed away, but his descendants have been proud to continue his good work. They may still be found in the front rank of our local educationists; and the loss of few citizens has been more justly mourned than that of his niece, Miss Ellen Richardson, a wise, powerful, and persistent worker in the cause of education, and who only died in the spring of this year, 1896.

To the resolutions are appended certain notes and educational statistics :—

"*Charity Schools in Newcastle.*

Saint Nicholas' -	40 Boys -	40 Girls.
All Saints' - -	40 „ -	40 „
St. Andrew's - -	33 „ -	40 „
St. John's - -	30 „ -	—
St. Ann's - -	60 „ -	20 „
Hanover Square Chapel	15 clothed,	—expence £40.
	218 Boys -	140 Girls.
	140	
	358	

The only Sunday Schools in Newcastle belonging to the established church are those in the Parish of All Saints, where 120 Boys and 120 Girls are taught by Three Masters and Three Mistresses.

Annual Expence of All Saints' Charity School, £248.

120 Boys -	120 Girls	All Saints.
30 „ -	30 „	Hanover Sq., expence £21.
175 „ -	175 „	Methodists.
325 Boys	325 Girls.	
325 Girls		
650		

There are now in Newcastle-upon-Tyne 37,000 children of school age as compared with the estimated 5600 in 1809, and of these 33,000 are at school. The amount spent annually in the city upon primary education exceeds £65,000. There are, according to returns kindly furnished me by members of the different religious denominations, 31,484 scholars in the Sabbath-schools of the city.

Upon the 29th July, 1808, it was announced formally, from the Mayor's Chamber, that a subscription would be opened for "the erection of a School Room for the Education of the Children of the Poor of Newcastle and its Neighbourhood, according to the Principles of Instruction proposed by Dr. Bell and Mr. Joseph Lancaster, immediately after a sufficiently convenient Scite for the said Building should have been determined upon."

Then, upon the 28th September, a representation was presented from several of the respectable inhabitants to the mayor, aldermen, and common council of this town, suggesting the expediency of marking the fiftieth year of the accession of his majesty to the throne, by some token of respect more permanent and valuable than that of illumination. The corporate body highly and unanimously approved the suggestion, and resolved to recommend, in lieu of illumination, a subscription for the establishment of a school for the religious and more general education of the children of the poor of the town.

The Committee, on the 20th February, 1810, placed one of the rooms of the Society at the service of "the Committee for the establishment of the Schools for the more general education of the children of the poor, for holding their meetings on the business of that institution."

I may quote upon this subject the words of the Report of 1812:—"The members of the Society will reflect, with conscious satisfaction, that they have frequently been the means of promoting by their co-operation the public-spirited and benevolent views of others. Particularly, that they have mainly contributed to excite the general attention which has been paid in this town and neighbourhood to the education of the children of the poor. This interesting subject was first brought forward for discussion by an excellent member since deceased (Mr. Isaac Richardson); and engaged the attention of several monthly meetings of the

Society under the personal sanction of the President. From these discussions arose the several propositions which were made for carrying into (effect) so important a measure, and which, both in Newcastle and Gateshead, have excited so much the laudable exertions of the public at large. Whatever differences of opinion may have taken place on matters of detail, it is sufficient that the great object contemplated by this Society, which had no party views or purposes to serve, is promoted in either way; nay better, perhaps, in the end, by the activity which a spirit of competition may excite and maintain: and there can surely be none but a laudable and beneficial activity in such a cause."

But we have got a little far forward and must turn back to April 1798, when we have an illustration of the great variety of the questions discussed at these monthly meetings, for the question then brought forward was that, which has not yet been solved, of a universal standard of weights and measures, and the most practical and easy way of applying it to remove the inconveniences which arose from the weights and measures then in use. That the variety of the papers was great, and the questions discussed were of local as well as of general interest, are shown by the fact that in the following year two meetings were chiefly occupied in considering the question of the embankment of Jarrow Slake. Questions relating to the improvement of the River Tyne were often brought forward, and in many ways. Thus in February 1802, the making of a canal from Newcastle to Hexham was discussed, and in the same year Mr. Joseph Bulmer introduced the subject of "certain improvements in Newcastle Bridge, and of a new line of quay above bridge on the north side of the river, with a view to promote the deepening of the tide-way, the removal of the sand, and the accommodation of small craft."

This paper was afterwards published. Again, the construction of a bridge across the Tyne between North and South Shields was advocated, and these matters were not merely talked about and then thrown aside, but they were carefully developed and discussed again and yet again.

The river leads naturally to the sea, and the sea suggests to those of us who look back to the first half of the century, thoughts of wild winter nights when the waves held high carnival and sported with the lives of those who go down to the sea in ships. It is a dangerous strand that of mountainous Northumberland, and in those days there was no refuge to be found by those who were so unfortunate as to be near it when the fell north-easter blew. Before the invaluable labours of the Tyne Commissioners had borne fruit, you might see, at one and the same time, many gallant ships lying wrecked at the mouth of the Tyne, on the dangerous rocks on the north known as the Black Middens, and upon the less forbidding but even more treacherous Herd Sands on the south. It is not to be wondered at that the Port of Tyne is the birthplace of lifeboats and life brigades.

In May 1798 the attention of the Society was drawn to the subject of lifeboats by a great and disastrous storm which occasioned much loss of life. The lifeboat had been invented some nine years before. Without mentioning the London coachbuilder, Lionel Lukin, who is said to have taken out a patent for such a boat in 1785, it is certain that there was a competition in 1788 for a premium offered by a Committee of South Shields citizens for the best design of a boat which would set the terrors of a stormy sea at defiance. One model was sent by Henry Greathead, a boatbuilder, and another by William Wouldhave, a journeyman painter. Neither of them satisfied the Committee, who gave Wouldhave a small sum for his as the

second best, but ordered Greathead to build a boat, apparently founded upon his model, but with many alterations suggested by them. This boat was built, and it first put to sea on the 30th January, 1790.

Now, when the members of this Society wished to have accurate information upon this important subject, they not unnaturally applied "to Nicholas Fairles, Esq., an Honorary Member of this Society, requesting that he would take the trouble to procure them an account of its construction and advantages, and favour the Society with his sentiments on the most probable method of rendering the knowledge of it general, so as not only to be consistent with, but to promote, the interest of its inventor." For some reason Mr. Fairles did not reply to this communication, but the matter did not drop, and the Society, having had the advantage of personal explanation from the inventor, and of an inspection of his drawings and plans, took active steps to have his claims brought before Parliament, which voted him £1200. The Trinity House, Lloyds, the Royal Humane Society, and the Society of Arts, also presented him with medals and gifts of money.

But in July 1802 Mr. Wouldhave wrote to the Society and formally laid claim to the invention of the lifeboat, and then and ever since there has been much contention as to the true inventor. There can be little doubt in the mind of any one who has, at this distance of time, carefully looked into the matter, that there was more of the Wouldhave model than the Greathead model in the boat ultimately constructed. So far as the invention is a north-country one, it must be admitted that the man who most certainly and sagely thought out the true principles upon which any successful boat must be constructed did not get the rewards.

One peculiarity of many of the papers read to the Society was that they seemed to have the power of arousing antagonism,

opposition, or competition, to quite an extraordinary extent. We have seen this already evidenced in the instances of the lifeboat and the safety-lamp, and I note that at the December meeting in 1808, no sooner has one gentleman introduced a washing machine constructed on a new method, than a grocer at the Head of the Side addresses a letter to the Society announcing that he has discovered another washing machine of a very simple construction, and soliciting the inspection of members. This was to be the beginning of the end of the familiar and dreaded washing-day. It is not recorded whether the Society ascertained by experiment which of the rival machines did the least damage to the articles entrusted to it. Not inappropriately, a drawing and description of an improved mangle was submitted to the inspection of the members at the July meeting of the following year.

Indeed, the monthly meetings were like a good sherris sack in that they had a manifold operation. New methods of tanning, of glass-making, of chemical manufacture, of milling, of hat-making; new ways of growing plums and peaches; the mode in which the decay of the older kinds of apple and pear trees might most certainly be checked, were not merely mentioned but carefully thought out and fought out. In December 1809, Sir George Cayley's papers on the possibility of constructing an apparatus for flying were discussed; and the subject for consideration at the two following meetings was "a proposed mode of ballasting ships by water confined in iron tanks." Turning these two problems over in their minds, our fathers probably found it hard to say which, if either, would be fully and satisfactorily solved before the close of the century.

Bearing in mind the remarkable discoveries in electrical science which have been brought before this Society by our President, Lord Armstrong, and our Vice-President, Mr. J. W.

Swan, the following entry in the report presented in 1801 has a certain interest :—

"Few persons can be totally unacquainted with the many curious phenomena which have been noticed by those ingenious persons who have set themselves to investigate that surprising modification of the electric fluid, which, from its first observer, has obtained the name of Galvanism. Desirous to exhibit to his fellow-members some of the most striking of these phenomena, the senior Secretary, with the friendly assistance of the ingenious Mr. Joseph Garnett, to whom, though not a member, the Society has on former occasions been much obliged, constructed a pretty powerful galvanic pile, which for several weeks continued to amuse those who visited the Rooms."

There is a sense of home enjoyment, of family life, about such a proceeding, which I am afraid is wanting in the Society of to-day.

But it was not easy to keep up the supply of papers, although, looking back over three-quarters of a century, it seems to us as though nothing of great importance happened without the Society's having its say in connection with it. In 1812, the Comet of 1811 was discoursed upon "very elaborately and its path elucidated by a model." The Blenkinsop engine and its work at Leeds were described by Mr. Turner in the same year. In 1817 Mr. George Raine, an apprentice at the Team Iron Works, exhibited "an ingenious invention for obviating the resistance of the back-water to the float-boards of steam-boats." But the managers of the Society were uneasy because of shortness of supply, and made many an endeavour to get more communications. In January 1814, Mr. Turner brought this matter forward, introducing it by a paper in which he explained what had been done already. I may quote what he says about the origin of

the Society, because it more fully establishes that which has been explained in a preceding chapter. "It was in consequence of the circulation of a paper read to a private meeting of a few friends . . . that this Society was established more than twenty years ago. Its original scheme was on a scale comparatively limited; being little more than a club or meeting for friendly discussion on literary subjects, either formally introduced by the reading of papers, or spontaneously arising in the course of ordinary conversation." He then went on to show how this object had been but partially accomplished, and how original communications were diminishing in number. He pointed out that by the starting of Societies formed to investigate some of the special matters which had been taken up by ours, the sources of supply would be still further lessened, and he concluded by stating that a few members had resolved to take in turn the duty of furnishing papers for the monthly meetings.

For a time this plan was successful. The number of papers and the attendance of members alike increased; the value and interest of the discussions was widely acknowledged; and the Society was once more kept fully abreast of the literary and scientific movements of the day. But ere long the demon of jealousy showed its ugly head, and the idea was set loose that the members who read papers formed a select coterie who dictated the policy of the meetings. As that policy had succeeded, this was not an unmixed evil if it had been true, but it was not true, and the false notion did harm.

When the Society got into its new building the meetings were at first kept up more easily, and many matters of great value and importance were brought before them. It had often been suggested that some of the papers should be published by the Society, and about this time the idea took shape; a sub-committee was appointed to attend to the

matter, and it actually set about the work. But it came to nothing. It is interesting to read in the Annual Report presented in March 1831, as part of the elaborate excuse offered by the sub-committee to explain their slow progress, "the distraction of the public attention, and particularly of the Press, by the various political questions and proposals which have taken up so much of it, and which at this hour are approaching their crisis." How long ago it seems! How hard it is for us to enter into the feelings of our forefathers during the fierce fight over the first Reform Bill!

It is to some extent regrettable that the idea of publication was abandoned, for many of the papers were of such a character as to have an enduring interest. Some of these were indeed printed, but in a fugitive form, and the Society has, in more than a century, published nothing which might serve as a permanent record of the excellent work which it has done. And yet it has been connected in quite an unusual way with many of the great men who have given that century its special feature, that of the triumphant application of science to the service of man. I have already mentioned several instances, notably that of George Stephenson and the safety-lamp. He does not seem to have brought his locomotive engine before it at any time, but when he was engaged in his splendid struggle with Chat Moss, and when the most eminent engineers had reported in favour of stationary engines and against the locomotive, we find that in that highly critical year in the history of steam locomotion, 1828, the members were following the bold construction of that tremendous undertaking, the Liverpool and Manchester Railway, with pride and interest. They do not seem to have shared the doubts and fears of the Southerners about the locomotive engine, for they were busily discussing, amongst other points, Mr. Robert Stephenson's

scheme of using coke instead of coal in steam engine boilers.

In November 1831, another of the great discoverers who have been connected with the Society, Mr. Hugh Lee Pattinson, then Assay Master at Alston to the Greenwich Hospital, read an elaborate paper upon the smelting and refining of lead ore, a process which had become so closely identified with his name when, in the year 1829, he discovered "the world-famous Pattinson process of separating lead and silver by crystallising."

There are many other papers which it would be pleasant to dwell upon, but I must only mention one or two more which have, in one way or another, quite a special interest. I shall have, in a subsequent chapter, to devote considerable attention to that in which, in 1831, Mr. T. M. Greenhow developed his views "On the expediency of establishing in Newcastle an Academical or Collegiate Institution for the education of Youth in the higher branches of knowledge." In the same year two evenings were devoted to discussing the important question of the state of the River Tyne, with a view to the improvement of its navigation, Mr. John Macgregar reading a "Treatise" on the subject, which was afterwards published, and which contained "many important and valuable remarks and suggestions." I note in passing, with much interest, that a gentleman who admirably filled the office of Treasurer for many years, and who is happily still with us, Mr. R. R. Dees, on October 7th, 1834, "read a paper on 'the Inexpediency of Capital Punishments,' which has since been printed at the request of several friends." In nothing, perhaps, has this century seen greater advance than in the art of travel. Whether knowledge be increased or not, men run to and fro upon the earth to an extent which is simply amazing. There was nothing to compare with this in the first

ROBERT STEPHENSON, M.P., F.R.S.

half of this century. The men who travelled had some clear reason for doing so; they did it with a definite object in view, quite other than mere pleasurable or restful change of scene. Norway was, for all practical purposes, further off from us then than Greece or Palestine is now, and he who could speak of it from personal knowledge was a much greater acquisition than a Greek or Syrian traveller of to-day is. In 1835 Mr. W. C. Hewitson, the eminent oologist, enlivened two meetings with an account of a tour which he had made in the Scandinavian peninsula in search of birds, eggs, and other objects connected with Natural History. Upon this tour he was accompanied by John Hancock, and they made their way to the far North, spending a considerable time in the Arctic Circle, then an almost unknown part of an all but unknown land, and gathering good harvest of knowledge of the life and habits of the innumerable birds which make the cliffs and mountains of the Land of the Midnight Sun their summer home.

But although other forms of usefulness, as we shall see more fully hereafter, were opening to the Society, the reading of important papers at the monthly meetings was nearly at an end. It is hardly too much to say that it died a natural death, partly from the constant increase in the number of local societies each with its own specific object of research, and partly from the rapid extension of the railway system. The Literary and Philosophical Society no longer held a unique position. It had no longer a monopoly of the opportunities which the town and district could offer for literary and scientific discussion, and soon the members who were carrying on independent research found it more satisfactory to take the results of their labours to the learned Societies in the metropolis, where they would receive the attention and have the advantage of the criticism of men of kindred pursuits from all parts of the United Kingdom. In

the forty-fifth year of the Society's existence the Committee reported that only one paper, a communication from Lieutenant A. M. Skene respecting his patent paddle-wheel, had been read. There was little improvement in the following years. In 1840 Mr. H. L. Pattinson explained the new invention of the Daguerreotype, which has long since been superseded by more rapid photographic processes. I must also note that in the Session 1842-43, Mr. T. P. Barkas, whose genial face was for so many years so familiar to our members, who took so active a part in the voluntary work of the Society, and who became "a household word" in this district for the zeal and ability with which he spread abroad the truths and disputable phases of scientific and quasi-scientific investigation, first made his appearance in connection with this institution, reading a paper upon "Phonography, or General Shorthand."

The Committee never ceased to urge upon the members the great importance of keeping up the supply of papers. Nay, they went much further than this: like Goldsmith's good pastor,

> "They tried each art, reproved each dull delay,
> Allured to (better things), and led the way."

In the report presented in 1846 they speak with some pride of the fact that six papers had been forthcoming in the Session which was just over, but they little dreamed that, half a century afterwards, the civilised world would be prepared gratefully to acknowledge that their pride was justifiable and amply justified by the results. The whole of the papers were contributed by members of the Committee, and they arranged with the proprietors of the *Newcastle Daily Chronicle* to give full reports which should afterwards be put into octavo form, uniform with *The Newcastle Reprints*, and a number of copies were to be struck off for those members who cared to obtain them. Amongst the

papers thus provided were three by "our talented young townsman, Mr. W. G. Armstrong," as the papers of that day spoke of our honoured President of to-day. The first was "On the spheroidal condition of liquids, and on the freezing of liquids in a red-hot crucible," and well do those who were privileged to be present remember the burst of enthusiastic applause which greeted the successful performance of an experiment which seemed really to be the achieving of the impossible. The second paper was "On the employment of a column of water as a motive power for propelling machinery," and was illustrated by many novel and interesting experiments, and "a beautiful model representing a portion of the quay of this town, with a crane upon it adapted to work by the action of the water in the street pipes, was placed upon the floor." This was described and shown in operation, and then follows in the report a striking and admirable instance of the caution and modesty of our great townsman. "Mr. A. concluded with some appropriate remarks, in which he stated that he did not advocate the immediate adoption of his plan, because any plan, however useful, might be injured if forced prematurely forward, before the age was ready to receive it." His third paper was "On some of the characteristics of voltaic and frictional electricity." With peculiar pleasure I record how nearly half a century afterwards, on the 7th February, 1893,—that memorable night when our Society celebrated its centenary,—Lord Armstrong once more delighted a large and brilliant audience by his treatment of this subject, and the remarkable and unique series of experiments by which he illustrated it.

But the day of the monthly meetings was over. The audiences grew smaller and smaller, the papers scarce, and discussions upon them scarcer. By the year 1856 the annual reports ceased to notice them. A few earnest attempts have

been made to revive them, but there was no demand for them, and the endeavours failed. The only business transacted at them came to be the election of members, save on two or three occasions when some special question closely affecting the welfare of the Society has been brought forward by special notice. Since June 1889 they have ceased to be held at all, the election of members having been entrusted to the Committee.

CHAPTER VIII.

THE LIBRARY.

"With awe, around these silent walks I tread;
These are the lasting mansions of the dead:—
'The dead!' methinks a thousand tongues reply;
'These are the tombs of such as cannot die!'"

THE collection of books for public use shows that a people has reached that stage of civilisation when some considerable part of it has begun to enjoy the quiet and studious phases of life. Amongst the most interesting relics which have been discovered of that Assyrian people which was once the foremost of the nations of the earth are the small tablets, some of minute size, covered with cuneiform inscriptions, and preserved together in great numbers. The enormous number of volumes said to have been contained in the Alexandrian libraries, or in those which were established by the Moorish conquerors of Spain, fills us with amazement. The first of these numbered some 700,000 volumes, and that founded by Hakam at Cordova 400,000 volumes. It is quite possible that these figures are exaggerated, and as they record manuscripts, not printed books, it is fallacious to compare them with the great libraries of the present day, for a comparatively small printed book would make a large manuscript. But the difficulty of collection then was incomparably greater than it is now. At

present the largest library in the world is the Bibliothèque Nationale in Paris, with 2,600,000 volumes, the British Museum coming next with 1,600,000. We may perhaps find some consolation for the fact that we have to occupy only the second place in the knowledge that our National Library has 203,000 readers in the year, whilst that of the French has not even a third of that number.

A century ago there were few public libraries out of London; few to which the public could obtain admission by subscription; and what there were did not contain any great number of books. Here, as in other lands, wealthy noblemen of learned tastes gathered large collections together as book-collectors, or for the delectation of the owners or their friends, but it would have been a noteworthy incident if, in a private house, you could have found four or five thousand well-selected volumes. Now there are many of such libraries to be found in every part of the country.

We are not surprised to find that when Mr. Turner brought forward his scheme for a Literary Society on January 24th, 1793, he left the question of the establishment of a General Library for future consideration. When, at the next meeting on the 7th February, with the Rev. Edward Moises in the chair, the Society was formed and its laws were discussed, one of the rules agreed to gave members the right to recommend, and General Meetings the right to direct, the purchase of books. In December of the same year, Mr. Moises wrote to Mr. Turner recommending the appointment of a committee to consider the outlines of a plan for carrying into more immediate effect the establishment of a General Library. Upon the 10th of that month the committee was duly selected, and in due course it made its report, and drew up regulations for the management of the intended Library.

THE REV. E. MOISES.

How humble the ideal of Mr. Moises and his committee was may well be gathered from the fact that at first an attempt was made to get the books by begging. The second Annual Report, presented on the 10th of March, 1795, has this note appended to it—

> "May it be permitted to hint that many books have found their way into the libraries of individuals, which, having no connection with the general line of study of their respective owners, are of little use to them, but might form a valuable addition to a general Library."

Now of all the ways which there are of collecting books,—buying, begging, reviewing, or stealing,—begging is the least satisfactory. The works which men are anxious or willing to get rid of are, as a rule, exactly those which other men do not wish to possess. Still, in our case, the hint was taken, and some of the proffered presents were worth the having. In the following report (the third) a catalogue of all the books then in the possession of the Society is given. There were 20 folios, 142 quartos, 240 octavos, 27 duodecimos, and 10 maps! The greater part of the books were what at that time were called works upon Natural Philosophy (and what we should style scientific books), and books of travel.

Let me say here, in order that I may not be misunderstood, that from the earliest infancy of the Society there have been handsome gifts of books made to it, books of the highest worth. Many of the most valuable works in our great collection have been thus acquired; but they were voluntary presents, not alms-gifts. I may instance the case of Alderman Armstrong, in 1858, who had desired that the Society should be invited to select from his library such scientific works as it did not already possess. This desire was so liberally fulfilled by his son, the present Lord

Armstrong, that 1284 works of great value were added to the Society's collection, and it obtained a more complete Mathematical Department than any other provincial institution in the kingdom.

But, even in Solomon's time, "of the making of books there was no end," and the practice has considerably increased through the twenty-eight centuries which have elapsed since that strange mixture of philosopher and fool placed the fact on record. What is true of the making is equally true of the collecting of books, and in reading, "increase of appetite doth grow by that it feeds on." From the previous chapters the reader has learned that the Society's books became numerous so rapidly that it had to move from one place to another for more accommodation, and had at length to build a home of permanent residence. At the time of opening this new building in 1825, the Society possessed more than 8000 volumes. I cannot find the exact number stated in any report, and it is not mentioned in Mr. Turner's address to the members on the occasion of their first meeting in the new rooms; but in the case which was submitted for Mr. Charles Butler's opinion about this very time, and in which the question of the best mode of holding the Society's property was raised, it is stated that the library then contained upwards of 8000 volumes. At the time of the Centenary celebration they were supposed to have increased in number to 35,000, and there are now in 1896, 48,000 books belonging to the Society, upwards of 2000 volumes being added each year. To this I may add that the salaries of the staff of paid officers has increased from nothing in the first year of the Society's existence to £454 6s. 8d. in the year 1895; and the sum expended upon books from £71 7s. in the first year of its possessing a library to £1037 5s. 1d. in the year 1895-96.

We find that, from the first, the usual difficulties which attend upon the keeping and lending of books were fully experienced by our Society. The borrowers were frequently at fault. The books were returned in a mutilated condition; alterations, erasures, inscriptions, and marginal notes were made in them; illustrations were removed and retained; books were lent to non-members; and many volumes joined that great regiment of lotos-eating works which is so painfully familiar to those who lend their books, and returned no more. Then, as so frequently since, there were certain works which were objected to by certain members because they considered them to be works of religious controversy. So early as 1796 a written protest was made against Hume's *Essays*, Cudworth's *Intellectual System*, and Paley's *Evidences of Christianity*, and the Committee allowed the propriety of the remonstrance, and those books were ordered to be removed from the Society's shelves.

Perhaps the hardest of all the battles which have been fought upon this knotty question of proper books was that which was waged in January and February, 1829, over the purchase by the Committee of Lord Byron's *Don Juan*. One curious feature of these discussions was the introduction of letters written to individual members by gentlemen living at a distance, and of more or less literary distinction, and another was the great part which the press of the district took in the fray. The book had to be withdrawn, but, from the observations which they make in the Annual Report presented in March of that year, the Committee evidently felt aggrieved at the way in which their selection had been attacked, and "the peace and comfort" of the Society had been disturbed.

I suppose that those of us who did not live in the first quarter of this nineteenth century have but little idea of the literary zeal, devotion, and enthusiasm which then permeated

the reading world. Looking back upon that great time, we are not surprised that this should have been the case. It followed closely upon an astounding *fin de siècle*. Old things, intellectual as well as social, industrial, and political, had been whirled away as in a devil's storm, and all things were to become new. Some of them have certainly taken their own time over the process. That first quarter of the century was alive with dreamers, thinkers, and actors. Life was full of stir. The old world was going through a period of new birth, for better or for worse as you may elect to think, but it would never be the same world again. What an outburst of noble song moved men's hearts, with what strange, morbid relics of the dead and dirty past somewhat dimming the glory, but doing much less harm than might, not without reason, have been expected! The healthy mind absorbed the beauty but rejected the excrementitious adjuncts. How the world waited for a new poem, and how they devoured it, and discussed it, and dreamed of it, until it became a part of their very lives! It was one of the golden times of our English literature, one of those times which enormously added to that precious inheritance to which every one, rich or poor, great or humble, who can read our English tongue, is entitled as of right.

It is amusing but refreshing to recall too the tremendous fights which have been waged in this grave Society over the admission of novels. In bygone days men were ready to spill much ink and to spend good store of strength to get the Waverley Novels admitted or kept out of the Library. If I remember rightly they were at last accepted as a gift from some generous member! But even so early as 1803 the Committee had experienced the extreme difficulty of keeping out fiction, as well as other things supposed to be objectionable. They mention then that the collected works of "authors who are an honour to our

nation" must be purchased, even though theology may be found in some part of such works. They also point out that, in the case of periodical literature, you must either do without it altogether, or you must be prepared for "the intermixture of articles on all subjects." And so novels which came out in monthly magazines were admitted to our shelves, but when completed and appearing as separate works, they were strictly tabooed. Frequently indeed did "Oliver ask for more," but he did not get it. The last fierce battle on this subject was fought some thirty years ago, and so fierce was it that timid members fled from the crowded and noisy room in unnecessary trepidation. It was "all sound and fury, signifying nothing." And in due course, not many years ago, novels were at length freely admitted, and "nobody seems a penny the worse," excepting, possibly, those who are so unfortunate as to read them.

The fact is that people have grown a little tired of endeavouring to prevent other grown-up people reading what they wish to read, and perhaps a little doubtful of the wisdom or justice of such a proceeding, and a little conscious that it is dictatorial and absurd. No doubt, in point of zeal, we are not nearly so good as our fathers were, but ours is certainly tempered with more discretion than theirs was. The day may come when men will feel some surprise to know that for long years Auguste Comte's *Philosophie positive* was a book forbidden to our members, and that in quite recent years certain gentlemen actually withdrew from the Society because, at a meeting of one of the many small associations to which from time to time we lend one or other of our rooms, a paper was read upon "The Unearned Increment."

But let us return to the Library. The principal aim of the Society has, from the first, been to make it of as much use and value to the student as possible, and with this object in view

there has been a constant endeavour to have the books properly classified and catalogued.

The custom in the early years of the Society was to issue with the annual report a list of the presents received during the preceding twelve months. Books, pamphlets, geological and mineralogical specimens, telescopes, shells, inscribed stones from the Roman Wall, stuffed birds, maps, and similar miscellaneous articles, are all mixed up together in these lists in the most admired confusion. But the third report, presented in March 1796, contains the first catalogue of the Society's books, divided according to their sizes, and a supplement to this catalogue is given with the fourth report. In the year following this plan was again pursued, but in 1798 the Committee printed the report by itself, and, in a separate pamphlet, they set forth the rules of the Society, a list of its members, and a complete catalogue of the books, still classified by size alone, blank sheets for the insertion of additions being duly interleaved. The Committee intended to make a small charge for these pamphlets, but, as the annual accounts were first published in the year 1804, I do not know whether this intention was or was not carried out. In 1799 the plan of publishing a supplement to the catalogue with the annual report was again resorted to, and this has been done with considerable regularity ever since. In addition to this supplement, a complete catalogue of the books and maps was published in 1801. It fills nearly seventeen octavo pages, and the division is still that of size.

Another complete catalogue was published in 1807, and an historical sketch of the Society was prefixed to it. In this sketch it is stated that the Library then contained nearly four thousand volumes; "that there are few instances of so large a collection having been formed of books so generally valuable; and that access to this collection has been rendered more easy to

persons of every description, as well occasionally as permanently resident, than has been done by any other institution."

This is a proud boast to make, and we may truly say that the liberality which distinguished our Society from the beginning has continued to be one of its prominent characteristics throughout its long and useful career.

The fifth complete catalogue was published in 1811, when the Library was about seventeen years old. The books were divided into eighteen classes, the books in each class being arranged alphabetically. There was also a general index, in which the whole of the books in the Library were arranged alphabetically. This catalogue gave much satisfaction, and one consequence was a marked increase in the number of members resorting to and making use of the Library. The Committee, in commenting upon this satisfactory state of affairs, announced that the authorities designed to print the catalogue of the Thomlinson Library, and that thus the members, as a part of the general public, would at length be able to avail themselves of the privilege of access to more than eight thousand volumes of much value, and it would be no longer necessary to purchase for the Society many costly works which the other library contained. Now the Public Library of the city has become the repository of the sadly shrunken and shorn Thomlinson Library, and we may well bear in mind the wise conclusion of our predecessors, that, "unless in particular cases, the purchase of many works of great price, but chiefly valuable for purposes of reference," may be avoided, their existence "in one accessible library in a place being sufficient for every purpose."

Still, however the purchasing of books might be limited in certain directions, it went briskly forward, and the store grew with such rapidity that only six years afterwards, in 1817, the annual report stated that considerable progress had been

made in the reduction of the various lists of new books issued with the annual reports since 1811 into one general supplement, classified and arranged in a similar manner to the catalogue of that year. It would very shortly be committed to the press. But that hope was fallacious, for the preparation of the supplement proved a much longer business than the Committee had anticipated. The examination of the books showed that more than a hundred and fifty volumes were missing, and great efforts were made to discover their whereabouts and to recover them. Amongst other means which were adopted, it was resolved to remit the fines in favour of those borrowers who had retained and not returned the books which they had taken out. These fines had been exacted with much regularity from the members who had shown a want of due punctuality in their return, and they amounted in one year to more than £24. The great delay meant, of course, a corresponding great increase in the number of books, and thus it came to pass that the idea of a general supplement was at length abandoned, and it was resolved to once more revise and print the entire catalogue. The missing volumes were, for the most part, recovered; the new catalogue was ready for sale by July 1819, and it gave great and general satisfaction. After this time the list of works purchased which was issued with each annual report was arranged in classes, so that the lists and the catalogue might correspond.

When the Society had completed its new building and the books had been removed into it, the Library proved to be very deficient "in the standard works of learning and science which are necessary to make this a library of reference, as well as of mere reading." By frequent perusal, many of the more popular books had been soiled and worn, and were no longer fit to circulate. They must be replaced. And yet the Committee

INTERIOR OF THE OLD LIBRARY.

feared that, even without this expense, much difficulty would be found in providing a sum of £230 a year for the purchase of new books, and the £90 "annually required for the purchase of works in continuation, Encyclopædias, Transactions of learned Societies, Reviews, Magazines, and Philosophical Journals. It was now also necessary to provide more than one copy of popular works in order to accommodate members, in any adequate way, with new and interesting books."

This fear was in a measure justified, and the amount expended upon the purchase of books had to be reduced; but, on the other hand, the Society received numerous and valuable gifts, becoming the possessor of (amongst other things) the Public Records, and a fine and important collection of local Acts of Parliament. Indeed, in spite of poverty and enforced parsimony, the year 1827 found the Committee again at its familiar task of "the completion and printing of a very complete Catalogue of the Society's large and valuable Library." At this time it was said that nearly 9000 volumes had been gathered together, and the task proved an arduous one. The catalogue was not finished until 1829. The Committee then spoke of it as "most complete and excellently arranged," and added, "The judgment and skill with which the contents of each book, it may almost be said, certainly of the several distinct works of each considerable author, have been examined, and their respective portions assigned to the class of subjects to which they belong, while they evince a very extensive range of knowledge, and are a striking proof of the patient attention and diligence of the Compiler, must eminently contribute to the convenience of those Members who may wish to study any particular subject; who will thus be directed, not only to those authors, but also to those parts of each author's works, in which the objects of their research will be found. When it is known, besides, that not the

slightest charge has been made for the many weeks, and even months, which have been devoted to this work, your Committee are persuaded that the Society will consider itself as under obligations to Mr. Hodgson; and will think no more of the delay with which its completion must necessarily have been attended, and for which the inspection of the Catalogue itself will sufficiently account."

And the Society, as in duty bound, did award its thanks to Mr. Thomas Hodgson for the great care and trouble he had taken in this matter.

Mr. Thomas Hodgson, one of the proprietors and editor of the *Newcastle Chronicle*, became a member of this Society in 1805, and continued to take an interest in its management until his death in 1850. He was trained under the Rev. William Turner, and was a man of great and varied ability. He was "an elegant and correct classical scholar, of profound antiquarian research and intelligence. . . . His contributions to the Typographical Society of this town, whilst they display the great excellency to which he had raised the art of printing in Newcastle, exhibit the versatility of his intellectual powers, and shed a lustre on his native town." He gave the *Chronicle* the position of the leading political organ between York and Edinburgh, but the Committee, speaking after his death, say of him, "whilst he fearlessly and regardless of consequences avowed and urged his principles on public attention, he never wrote a line personal to an opponent, or un-becoming a gentleman to compose. His kindness and urbanity of disposition endeared him to a large circle of devotedly attached friends, and it is not the least tribute to his character that all parties regarded him as an upright and honest man."

When the traditions of the Elders which had, through long centuries, gathered round the Law as given by Moses, were

reduced into writing, and the Mishnah was an accomplished fact, the traditions which were in turn to form the Gemara, began at once to cluster round the Mishnah. And similarly, the very year which saw the new Catalogue appear, saw also a Supplement printed of the books which had been added to the Library since the date of the Catalogue, and each subsequent year saw a similar Supplement appear. In five years' time, 1834, a General Supplement was printed, alphabetically arranged for the purpose of easy reference, but with the class of each book inserted before its date; but this publication did not in any way interfere with the regular annual appearance of classified book lists.

All this time there were difficulties in actual working, such as are, I suppose, incident to all institutions of this kind. Resolutions were passed occasionally that the Reference Department of the Library should be more carefully attended to, or, in other words, that in the purchase of books the Committee should aim at obtaining those which are too costly for private purchase, and those which, though not perhaps immediately popular, remain for all time of actual service to the student, and give character to a collection. The more valuable books of reference were not allowed to circulate, and in 1836 the room upstairs, which is still used as the Committee-room, was set apart (when not in use by the Committee) as the place where members might consult those works of reference which came into the before-mentioned category. But we find that every now and then complaints continued to be made—as they have continued to be made, at uncertain intervals, ever since—by one or other of the two great classes into which the members may at any time be divided, the readers and the students. The former declared that the Committee expended too great a proportion of the funds available for the purchase of books in buying scientific

works which the great majority of the members cared nothing about; whilst the latter rejoined that far too much money was laid out in acquiring the lighter and more ephemeral publications of the day.

The simple fact is that Committees vary both in their views of their proper functions and in their notions about the purchase of books. This year the fact that a work is cheap will be a sufficient recommendation; next year the same fact will ensure its rejection. There is always a tendency, not merely natural, but frequently wholesome, for the Committee to constitute itself censor of the morals or method of a book, rather than simply to consider how far it is likely to be in demand amongst the members. In 1842, the then Committee explicitly stated that their object was "rather to lead the taste of the Society, than to pander to a corrupt desire for trashy works." And yet the members of the Committee are elected annually from the general body of subscribers, to represent them and, presumably, to purchase those works for them which they wish to read. If this is not done, many persons leave off subscribing to the Society, and join "some of the numerous Book Clubs which have been formed in the town, and are likely to increase." This report of 1842 also states that "the Library is the bond which has held the Society together for so many years, and which has enabled it to struggle through so many difficulties. In short, every day's experience shews that it is by those persons who subscribe for the use of the books the institution is principally supported."

This report is of special interest, because it shows how much thought was bestowed upon the purchase department, and that the Committee was specially anxious to give their due consideration to every class alike. As they had just added many valuable and expensive books, they proceeded to explain the principles

which had guided them in their choice. The proportion of scientific works was large, not only from their being useful, and suitable in the studies of many persons resident in this neighbourhood of chemical manufactures, mechanical arts, and coal and lead mines, but also because so many works of intrinsic merit on those subjects had of late appeared. Several additions had been made in ecclesiastical history, in which the Library had been defective, and these remarks apply also to British topography. Wisely indeed did the Committee "recommend to the attention of their successors the propriety of setting apart a moderate yearly sum with a view to gradually complete the collection of County Histories, and other books of this class." Then they also point out how much is to be done in completing the Society's copy of the statutes at large. After discussing the graver works at some length, they proceed to speak of the great demand for the publications of the day in the lighter department of literature, and the difficulty of meeting it. They account for the demand itself by remembering "that very many of the members, being engaged in arduous professions, will not feel inclined, after the labours of the day are closed, to read other than the lighter works." And then, as the manner of committees is, they make one or two vague suggestions, and leave to their successors the dealing with the difficulties which they have described.

It was eleven years since the publication of the last catalogue, and the Committee had taken the publication of a new one into serious consideration, but, although some of the yearly supplements were out of print, many copies of the catalogue itself remained on hand, and this question was also referred to the new Committee for further consideration. This did not prevent a whole page of the report being devoted to discussing the best mode of doing that which it was resolved not to do.

But the new Committee did take many of the matters bequeathed to it into further consideration. In the purchase of books they laid down three great objects to be kept in view—"to supply the members with the best of the lighter publications of the day, novels excepted; to give them access to such Books of Reference as are too expensive for the generality of private libraries; and gradually to form a connected chain of human knowledge, advancing as it advances, and giving the student, if he cannot follow out his pursuits with the aid of the books in the Library, from the limited time allowed for keeping them, the opportunity of ascertaining which it would be desirable he should himself procure." But they took up seriously "the supply of the lighter publications of the day." They state that "they are fully aware that the publications of the day are not those to which the book fund should be especially devoted." That there was no book fund was, of course, a detail. Political economy has furnished us with a similar non-existent wages fund, also a detail. It would have been useful and interesting if they had given the reason for their conclusion, especially as they add, "Of the 700 members, ladies and gentlemen together, at least one-half take out books of this kind—many of them works of no other description, and it does not suffice that the book should be of an amusing character, it must also be new." Then they go on to show at how small an expenditure every one could be satisfied, and again leave it to the new Committee to take the question into their early consideration! The new catalogue is not mentioned.

The new Committee does not seem to have troubled themselves about either matter. They turned their attention to "the Law Books in possession of the Society." They agreed, upon the suggestion of Mr. William Bainbridge (well known as a barrister

practising in Newcastle, and the author of a learned work on *Mines and Mining*, and other books of a lighter character), that these books should "in future be classed and placed together for the more convenient access of those who may wish to consult them, and that the Society should invite the further donation of Law Books from those members and other persons who may be interested in establishing an useful legal Library for research and reference." But the only donation received was one of fifty volumes in folio of old Reports from Mr. John Adamson, then Senior Secretary. The Committee had come to the conclusion that there were only two sure ways of providing a legal Library: the first, to rescind that part of the rules of the Society which forbade the purchase of professional Law Books; the other, and perhaps the better way, was that the gentlemen of the legal profession of this town should form themselves into a society expressly for the purpose of "establishing an useful legal Library for research and reference." This broad hint was not lost, and for many years the Law Society of Newcastle and Gateshead has been in the possession of an excellent and useful library of the kind suggested.

In the following year's report the Committee are still silent on the purchase of books and the new catalogue, although they enter into the history of the Library and say that "competent persons, both connected with the Society and from a distance, have stated that so useful and well-selected a provincial Library is scarcely to be met with." This being the case, why not leave well alone? At the annual meeting, Mr. R. R. Dees made an unsuccessful attempt to instruct the Committee "to order for the Library, from time to time, such Standard Prose Works of Fiction as they may see fit."

The discussion upon this motion may have wakened the Committee up, especially as there was a serious and continuing

decrease in the number of members. The Librarian reported constant discontent arising from the great difficulty experienced in getting new books, and a gentleman, once a member of the Committee, and who was in the Library nearly every day, had waited sixteen months before he got the particular book which he wanted! The Librarian had suggested the purchase of several copies of the more popular works, as well of the magazines and reviews, disposing of a certain number after a time, and the Committee, "after weighing the matter, had come to the conclusion that something must be done," and "begged to recommend the subject to the serious consideration of their successors." After that who can say that life is short?

But the old nursery story of the pig which would not go over the bridge comes to an end when the cat would catch the rat, and so the story of the Committee which would not purchase sufficient books to satisfy the desires of the members reaches an appropriate conclusion when a new one is appointed which has the temerity to act as well as to talk about action. That which was elected in 1846 set to work at once to buy a large supply of the magazines and reviews, and of the more popular books, and the result was that the applications for membership at once began to increase. Arrangements were made for the systematic sale of duplicate copies.

After this good example we are not surprised to learn that the Committee elected in 1847 set to work in good earnest upon "the formation of a new Catalogue." The last had been printed in 1829; there had been seventeen supplements to it, and the number of books in the Library had nearly doubled. The report presented to the Annual Meeting in 1848 states that the Catalogue is prepared and is about to be sent to the press, and that Mr. George Wailes had undertaken to see the work promptly and properly executed.

This Catalogue was to be really an important undertaking. Many copies of the last still remained on hand, and the Committee were anxious to get so many purchasers of the new one that the cost would be materially reduced. They therefore gave much time and thought to the best form to adopt, and they ultimately concluded to adhere to the classified form, "such modifications only being introduced as the more advanced state of Science and the greater number of books seemed to demand." The sub-divisions would be more numerous than before, and in some instances the arrangement of the subjects would be slightly altered; and, in order to render the whole more efficient, an alphabetical index both of authors and subjects was to be added. The catalogue so formed would "be a guide to literature generally." But this new Mishnah would necessarily have its Gemara. Books would continue to be multiplied, and supplements would shortly be again required; but the idea was to print them upon one side of the paper only, and so to classify the books in them that members whose copies of the catalogue had been properly interleaved might cut up each supplement when it came out and insert the different works in their proper places. This could not, of course, be done with the alphabetical index. The catalogue thus prepared would have many advantages; amongst others, was "the facility with which it would shew both the riches and poverty of a library."

The cost of printing it would come to more than £400, and the Committee hoped that, by offering it at a very low price, a rapid sale would be ensured. "When the last Catalogue was printed, after much clamour and disturbance, not half the impression was sold during a space of twelve years." This new one would form a handsome volume of a thousand pages, and five shillings per copy did not seem an exorbitant price.

Mr. Wailes was ably assisted in his labours by Mr. John Thornhill, so long Librarian to the Society, but the task proved to be a greater one than had been anticipated. They certainly did not shirk the work, for they included in it references to the more important papers in the Transactions which the Library contained of the various learned societies. The Committee had expected that the catalogue would be in the hands of the members about August, and it was ready by the end of the year. Its cost had been much less than was anticipated, for it apparently was completed for about £200. Its existence enabled reductions to be made in the cost of Library Assistants, which saved some £65 a year, and as £73 10s. 6d. was realised by its sale in the first two years, and as no other catalogue has been printed since, the Society was not much out of pocket by the transaction.

And thus, at last, the shortcomings of the Library had been fairly attended to, and this was wise. In the report of 1842, which I have already made frequent allusion to, the true principles which should regulate the due maintenance of a subscription Library had been laid down, and the theory had actually, in seven short years, been carried into practice.

The troubles of book-buyers or book-collectors do not, however, end when the books have been purchased. The next question which demands an answer is, "Where are you going to put them?" The provision of sufficient room for the constantly and rapidly increasing stock presented a serious difficulty. Three thousand volumes, which no one was likely ever to ask for, had been placed in the room upstairs, but this proved a homœopathic measure of relief. The Library remained obstinately overcrowded. The idea of having cross-presses from the pilasters, at right angles to the wall and extending into the room, had been seriously entertained, but to carry this

out would make it necessary to go to the heavy expense of providing much more light. Then another of these imperative questions which address themselves to all who acquire books is, "Having got them, how are you going to keep them?" I do not allude now to the minute ravages of the book-worm or the extensive dilapidations of the professional book-borrower, but rather to what the law calls "the act of God," to wit, damp, gas fumes, and the like. The binding of the books was suffering greatly from the products of the imperfect combustion of poor coal gas. When you took a book off the higher shelves it would generally act like a hermit-crab and leave its outer covering. These are samples of the troubles which the increase of the library brought with it.

And all this time the heavy liabilities of the Society hung like a millstone about its neck, and the Committee was ever confronted with the difficulty which is perhaps a more common one now than when Israel was face to face with it in Egypt, that of having to make bricks without straw.

But they were full of resource. They set to work at once to adopt a new method of ventilation which Mr. T. Gray, a worthy tobacconist, and well-known Newcastle character half a century ago, had adopted on his premises in Grey Street, and they also resolved to borrow instead of continuing to buy the lighter books. They entered therefore into an arrangement with Mr. Mudie by which, in consideration of a large annual subscription, he undertook to keep the Society supplied with a large number of the newest books. This arrangement, with modifications, and with one short break, when the London Library Company took Mr. Mudie's place, continued in force until the year 1893, when it was abandoned in favour of the purchase and re-sale of considerable numbers of popular works.

In 1852 the Duke of Northumberland presented the Society

with 203 cases containing the Ordnance Maps of Ireland and a portion of those of England, but he expressed the wish that inhabitants of the county who were not members of the Society should have the opportunity of referring to the maps. This introduced rather a new state of affairs, and gave the Society a semi-public character, which was confirmed when, in 1856, the Government presented to the Corporation of Newcastle a set of the Specifications of Patents from the establishment of the Patent Office in James I.'s reign, and undertook to keep them up regularly, upon condition that a convenient place should be provided for them, and that they should be open to public inspection without charge. The Society, with its wonted liberality, gave them house-room, the Corporation paying for the needful shelving and for binding the volumes, and this arrangement continued to the year 1882, when they were all removed to the new Public Library. Several prominent members of our Society took an active part in the agitation which led to the adoption by Newcastle of the Public Libraries Acts.

The reduction of the annual subscription in 1856 was followed by a great increase in the number of members, and a corresponding increase in the demand for and the circulation of books. The Committee resolved to prepare and publish a Supplement to the Catalogue, and it made its appearance in some two years' time. The Catalogue itself was still in demand, and the new members no doubt accounted for this to a considerable extent. It is interesting to note that they joined with the intention of making regular use of the library, for whilst the number of subscribers doubled, the circulation of books increased threefold, and, at the same time, the complaints of difficulty in obtaining books were greatly fewer. The arrangements with Mudie had for the time fairly met the requirements.

But the Committee found much difficulty in persuading the new members that the laws as to the circulation of books should be obeyed, and they had even to threaten offenders with expulsion from the Society. And they were greatly troubled by the carrying away of new books without having them duly entered by the Librarian, for this usually meant that they were never returned. The theft of books has been slight, but it was almost constant until the porter caught a gentleman, who was not even a member, making his way down the back staircase with seven volumes under his arms and in his pockets. He was brought before the magistrates, and that worthy specimen of rough North-country common sense, Alderman Ralph Dodds, was on the seat of justice. The evidence having been given, "Well, what have you to say for yourself?" shouted the Alderman. "I thought it was a Free Library, your worship." This was more than the aldermanic temper could stand, and there followed a roar of "A Free Library! a Free Library! I'll larn ye what's a Free Library! Six months: six months: a Free Library!" After this books ceased to be conveyed.

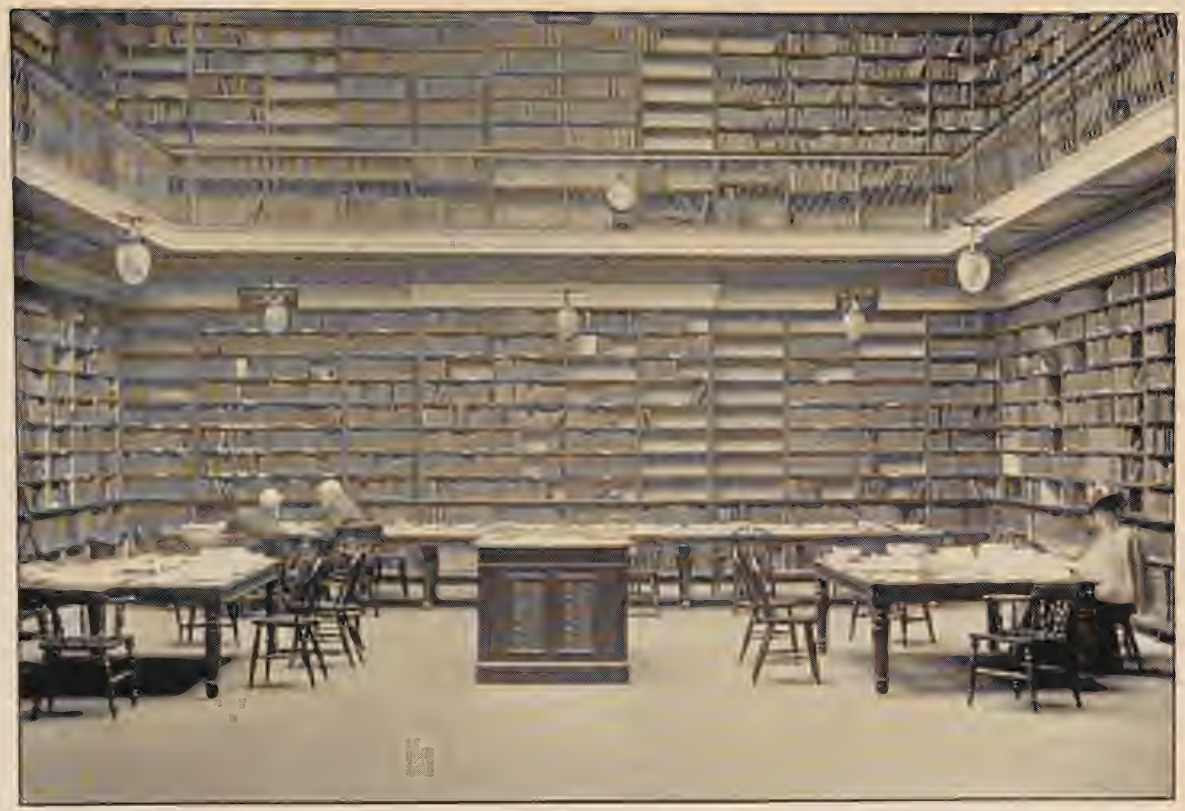
The "accumulated literary treasures of the Society" had quite outgrown all the provision which had been made for them long before the year 1860, when a determined effort was made to grapple with the difficulty. The book-shelves of the gallery were extended to the recesses underneath the windows and to every available space there, and nine double book-cases were placed transversely on each side of the library floor, six writing-tables being arranged in the recesses formed by these book-cases. But in ten years' time the old difficulty had again made itself felt, and in 1870 an agreement was come to with the new Mining Institute by which a communication was made between the two buildings. Most of the Society's scientific books were removed to the Wood Memorial Hall, and the

entire stores of the two societies were thrown open to the members of each alike, but for purposes of reference only. This at once relieved the Society from the difficulty of finding storage room.

In 1868 another Supplement to the Catalogue was prepared and printed. It included the ten years' additions since the Supplement of 1858. It was resolved that the annual purchases were also to be regularly printed in future and circulated with the report of the Committee.

And then, in 1885, a step was taken which has added greatly to the permanent comfort and usefulness of the Institution. The North Eastern Railway Company served notice on the Society that they proposed to take away its yard under parliamentary powers. Fortunately, one of the Secretaries was interested in certain land which the Company had already acquired to the south of the Society's building, and, as before mentioned, he suggested to the Company's Chief Engineer that the Company should give to the Society as much land to the south as it took from it on the west, and should pay it in cash such a sum as would enable the Society to increase its building by adding a fresh wing at right angles to the existing premises. Ultimately this plan was fully carried out, the Company paying £5500, Lord Armstrong, with his wonted liberality, giving £700, and the members generally subscribing £750. The fresh book-space which the Society has thus obtained will put it beyond difficulty on that score for many a long year to come.

"In contemplation of the extension and re-arrangement of the Library consequent upon the increased accommodation," arrangements were made for a fresh catalogue of the books, and the report of 1888 stated that the work was well advanced, and thanked "those ladies and gentlemen who, under the able and



INTERIOR OF THE NEW WING OF LIBRARY.

enlightened guidance of Mr. Frederick Emley, have devoted much valuable time and attention to this task." To Mr. Emley I am indebted for the following account of the new Catalogue. It was still in course of preparation when, in February 1893, there came the great catastrophe by which we lost the greater part of our books, and in the heavy task of replacing them, which I shall have to speak of in greater detail in my concluding chapter, the value of the new Catalogue, which fortunately escaped the flames, could scarcely be over-stated.

"In the catalogue of 1848 and the two supplements published in 1858 and 1868, the books were grouped in eighteen classes, with numerous sub-divisions, and with an alphabetical index to subjects and authors.

"From 1868 to 1888, lists of the additions, in alphabetical order, were published annually, but in 1888 even these lists were discontinued.

"The old catalogue had thus fallen twenty years in arrear, and, admirable as it was in its day, it had become quite inadequate to the expansion of the field of knowledge, more especially in natural science, and moreover, the increased attention given to the subject of cataloguing consequent on the growth of the Free Libraries here and in the United States, had resulted in the introduction of new and better systems.

"But strongly as the necessity for a revision of the Catalogue was felt by individual members, no action was taken until when Mr. B. J. Snell obtained the appointment of a sub-committee to consider the subject. The writer is not aware that anything was done by this sub-committee, owing perhaps to Mr. Snell's quitting Newcastle shortly afterwards.

"In 1887 the Sub-committee was reappointed. Mr. J. J. Butcher and the writer, its new members, met several times to talk over the subject, and soon came to the conclusion that

nothing could be done without an examination of the various systems of cataloguing in use.

"The engagements of Mr. Butcher and his departure from Newcastle threw the whole of this work upon the writer, who examined, as well as he was able, the British Museum system and the principal systems in use in the United States.

"In this work he was greatly helped by the *Library Journal*, the organ of the American Librarians' Association, and by the States Government report on Public Libraries in that country, 1876. The result of this preliminary examination, and it may be admitted of an attempt to construct a scheme, was to convince the writer that the best system for the Society's use was Mr. Melvil Dewey's 'Decimal Classification.'

"The main feature of Mr. Dewey's scheme is the division of the field of knowledge into ten classes, named and numbered as follows:—

"0 General Works.
1 Philosophy.
2 Religion.
3 Sociology.
4 Philology.
5 Natural Science.
6 Useful Arts.
7 Fine Arts.
8 Literature.
9 History.

"Each class is divided into ten divisions, and each division in ten sections. Thus Mathematics is numbered 51, as the first division of Class 5, Natural Science; and similarly, 511 denotes Arithmetic as the first section of Mathematics.

"Sub-division can thus be carried as far as may be required.

"The class, division, and section-titles, together with their synonyms or alternate titles and relative numbers, are arranged in one simple alphabet, which thus affords a reference quick, short, and clear to every part of the scheme.

"The system is complete to date, and is capable of unlimited expansion. While it offers special advantages to the student who will take the trouble to master it, the ordinary reader can, through the indexes, use it without preliminary study.

"In addition to the printed subject index there is an alphabetical index on cards to every author represented in the library.

"After the name-card come the title-cards to the author's works, each work being on a separate card, which gives the number of the section in which the work is classed and the number of the work in that section.

"Societies publishing transactions are treated as authors.

"Titles of well-known series, *e.g.*, 'Bampton Lectures,' 'Badminton Series,' are also specially indexed.

"Thus the reader in search of a work, or of the works of a known author, or of the transactions or proceedings of any society, or of any series bearing a distinctive title, will at once find the object of his search entered in the Alphabetical Author Index.

"And any subject index study will be found entered in the Alphabetical Subject Index.

"In each case the number on the card will enable the reader to refer easily and quickly to the shelves.

"Anonymous works will be entered in the Author Index, and, to facilitate search, a separate list of them will probably be made.

"Mr. Dewey's scheme was recommended by the Sub-committee to the Committee and adopted in 1887.

"The first step taken was the making of a card catalogue, which should ultimately form the copy for the printed catalogue. With the help of a number of members, both ladies and gentlemen, the old printed catalogue was cut into single titles and mounted on cards, but, owing to the defective nature of the cataloguing, this part of the work proved of little value.

"The next step was the engagement of four young ladies, who proceeded to re-catalogue the Library, and at the same time to classify the books approximately on Mr. Dewey's system.

"This cataloguing and classification were carried out under the superintendence of the Librarian, assisted by Professor Merivale, who, on the 14th July, 1891, delivered a lecture to the members on the new system.

"In June 1891 the work had progressed so far that the whole of the Library could be re-arranged on the shelves according to the Dewey class numbers, and the catalogue cards were thrown into order in two sets, the one set in the order of the books on the shelves, and the other in author alphabet order, the cards having been made in duplicate for the purpose. Moreover, cross reference cards had been made out to the extent of not less than 50,000. The Dewey system comprises a subject index of 20,000 headings, providing for subjects from the most general to the most highly specific, and a close classification necessitated the reference to some works under many headings. One book received 3000 such references. The completion of this enormous amount of cross reference work had to be deferred; but in the meantime a rough revision of the class numbers of the books was being hurried through, when the fire occurred and threw the work into confusion.

"After the fire it was found necessary to pass three-fourths of the Library through the bookbinders' hands for rebinding or

repairs, and over three years was taken to finish them. As soon as they were practically all returned (September 1896), the Committee decided to go on with the catalogue work, and push it through to completion as quickly as possible, and appointed a special staff to do the work. They have been at work about three months at the time this is being written. Mr. Peddie, who is specially qualified for the work, is revising the classification of both the book cards and cross reference cards, while the others of the staff re-write and re-assort as directed. Besides the catalogue cards, catalogue slips are being type-written, five copies for each main title and four copies for each cross reference, to form two complete sets arranged in subject order, and two in author order, while the fifth main title set will form a shelf list for the purposes of stocktaking.

"The slips are to be put in loose binders, and will receive further insertions as new books are purchased, thus being kept constantly up to date.

"In addition to these slips, one is also being made for each portrait, and one for each locally printed book or pamphlet.

"Local works are being arranged in a parallel Library, having a letter to signify the place, *e.g.* N = 742·82 Northumberland; and if not history or topography it is followed by the Dewey class number, as N580 Flora of Northumberland. A parallel Library is also being formed of large books that will not go in the ordinary fixed shelves. These will be arranged around the main wall of the main library and will run in the Dewey order, the same as the 8vo works."

When it is completed the Society will assuredly have a noble catalogue, but it will have been obtained by a heavy expenditure of time and money.

CHAPTER IX.

LECTURES.

AT the present time the good folk who inhabit Newcastle-upon-Tyne are a much-lectured people. During the winter months, which in our latitude may be held to extend from September to April, we have probably no night, Sunday or wor'day, upon which the seeker after knowledge may not have his desire gratified, and, upon most of them, he may even select the means of gratification most suited to his taste. And, in saying this, I take no account of regular systematic courses of lectures wholly educational in their nature, or of those, also possibly educational, which are of a yet more private character being indeed specially adapted for and only intended to reach the ear of the one person actually addressed. This plethora of intellectual wealth is of quite recent growth, and it has developed with startling rapidity since, owing to the Education Act of 1870, boys and girls generally became the possessors of that dynamitic force, "a little knowledge."

But there was nothing of the kind here or elsewhere in 1793. I do not mean to say that lectures and courses of lectures were not delivered in some unknown places on earth. All things are possible even if you do not believe. But, unless in University

towns, they were few and far between, and for any practical purpose there was no such thing as the popular lecture. For centuries much of the teaching at Universities had been done by lecturing. It has been surmised that the frequent discussions of the Academies of the Renaissance sometimes gave place to discourses or addresses. No doubt the step from the learned circle to the unlearned multitude outside was only a short one, but it was one of peculiar difficulty, one in fact which Mrs. Grundy would not be quick to tolerate, and which would, at first, be taken secretly, accidentally, or only by bold men.

I cannot say certainly who was the first person who gave popular lectures in Newcastle, but the earliest record of anything of the kind which I have found is a series of lectures upon the Nature and Properties of Water, given in 1770 by Dr. Rotherham, a physician in large practice, in "Parker's Long Room, Bigg Market." They seem to have been illustrated by experiments, and were apparently dictated by the insufficiency of the existing water-supply, and with the object of assisting the Corporation, who were then considering which of the springs or streams in this vicinity was the best adapted for public use.

Then in "the Reports, Papers, Catalogues, etc., of the Literary and Philosophical Society of Newcastle-upon-Tyne, collected by Anthony Hedley," and presented by Miss Hedley to the Society, it appears that one of the original honorary members, Henry Moyes, M.D., Ac. Americ. Soc., etc., issued a syllabus of nineteen lectures on the Philosophy of Natural History, "to be illustrated and confirmed by experiments where the subjects may require them," and that the first lecture was to be delivered in the Assembly Rooms at 12 o'clock on the 18th inst., whenever that might be. The only clue to any date is upon the portrait which accompanies the syllabus. It shows a benevolent-looking elderly gentleman,

with a white wig and dark-blue spectacles, wearing a rich velvet coat and elaborately frilled shirt, and standing in a kind of pulpit, with a lighted candle on his right hand, and four phials and (apparently) a bottle of Hollands on his left hand. There is pathos in the dark spectacles when you have learned that the lecturer was blind. The portrait bears the date 1796. As lectures were a rare commodity in those days, they were correspondingly dear.

"Admittance of Gentlemen to the whole Course, One Guinea each.
„ of Ladies, Half a Guinea.
„ to a single Lecture, Two Shillings."

I need not say much about the syllabus. It was wide in scope. The first lecture was "On the Formation, Antiquity, and Present State of the Terraqueous Globe," and the first item in it was "A general view of the Structure of the Universe." The subjects of the different lectures were very numerous and agreeably varied: "the never-ceasing frost in the superior regions of the atmosphere," "the whispering gallery in St. Paul's Cathedral," "electrical fishes," "the Draco Volans," "Warm and Tepid Baths—their theory and effects," "directions relating to Cold Water bathing," "the Cold Bath and its effects on the system," and last of all, "the associating principle, and the influence of Society on the Human Mind."

But I have not been able to ascertain whether this course of lectures was given in connection with this Society, or, indeed, whether it was ever given at all. The first lectures which were given in this connection were a course upon "Comparative Anatomy," by Mr. Wilkinson, who was a surgeon at Sunderland. The resolution to lend the room for this purpose was come to by the Committee on the 16th January, 1798, and is so brief and general as almost to induce the belief that it was quite a usual

and customary thing, and that the terms upon which the use of the room was allowed were well known. There is no certain mention of these lectures anywhere else in the Society's papers.

A much stranger and more interesting lecturing announcement appears amongst those papers in September of that same year. "Dr. Katter-felto, M.D., Professor and Teacher of Natural Experimental Philosophy, Astronomy, Natural History, and other Occult Sciences," the poet Cowper's

> "Katterfelto with his hair on end
> At his own wonders, wondering for his bread,"

was, for a whole week, "to deliver his various useful Philosophical lectures in this town," and "at the Philosophical Society's Room in St. Nicholas Church Yard." The bill which makes this announcement states that he "has been travelling these 34 years past through most parts of Europe, and has lectured in London for many years, with great applause, where he has been honoured with some of the Royal Family." But that those who are really interested in these matters, and who wish to know exactly the kind of scientific pabulum afforded to our citizens ninety-six years ago, may have the whole matter before them, I reproduce here the bill itself, as nearly as the circumstances of the case will allow. But it is only right that I should clearly explain that, although these lectures were given in this Society's rooms, they were in no sense lectures of the Society. Dr. Katterfelto took the rooms for the purpose. It was just at the time that the Society was removing to the Old Assembly Rooms, and probably the books and furniture had already been taken away. The very learned and astute lecturer was the very man to seize eagerly upon such a splendid opportunity to surround his caravan with a philosophical halo.

This announcement is indeed passing strange. There are

wonders which might well make the lecturer's hair stand on end, and business and most empirical science are blended in judicious proportions. How delightful it would have been to assist at one of those early evening lectures! How constant the use of lancets must then have been to permit their introduction in a popular lecture, for now many persons scarcely know of their existence! How charming to be a Freemason, and thus liable to be surprised (although the reason is scarcely so clear as it might be) by a Magnetical Clock! And what would not the Watch Committee of to-day be prepared to give for the "Model of a House whereby he (the lecturer) explains how a thief may be catched or killed when robbing a house"!

But, apparently, this course of lectures, amazing as it was, did not satisfy the inquiring public of Newcastle. Perhaps

> "increase of appetite did grow
> By what it fed on,"

and, like Oliver Twist, they asked for more. Perhaps the Committee felt bound, as their rooms had been used by so extraordinary a person, to give the people of the good old town the chance of seeing what an ordinary scientific man was like. At all events, in December of that same year, 1798, the indefatigable Mr. Turner read "Some observations on the propriety of attempting the introduction of Courses of Lectures on subjects connected with the happiness of mankind as members of Society," and it was resolved "that the Secretaries be directed to write to Dr. Garnett, Professor of Natural Philosophy and Chemistry in Anderson's Institution, Glasgow, inviting him to deliver Lectures in this town on these important subjects during the course of the ensuing summer."

The Scotch Universities take their Long Vacation from April to October, this practice having probably originated from the

Dr. KATTERFELTO, M. D.

Profeſſor and Teacher of Natural Experimental Philoſophy, Aſtronomy, Natural Hiſtory, and other Occult Sciences,

ho has been Travelling theſe 34 Years, paſt through moſt parts of Europe, and has Lectured in LONDON for many Years, with great applauſe where he has been honoured with ſome of the Royal Family, and will now deliver

His various uſeful PHILOSOPHICAL LECTURES in this Town.

His whole Courſe of LECTURES in Natural Experimental Philoſophy, conſiſts of 12 different Lectures, which will be illuſtrated with neceſſary Experiments for the explanation of the various branches of that great and uſeful Science.

Dr. KATTERFELTO will Lecture on the following intereſting, important, inſtructive, and entertaining ſubjects, viz. On the General properties of MATER, MECHANICS, PNEUMATICS, CHEMISTRY, ELECTRICITY, HYDROSTATICS, OPTICS, the NEWTONIAN Laws of GRAVITATION, MAGNETISM, and ASTRONOMY; and amongſt ſeveral hundred different Articles in the Doctor's poſſeſſion, are the following.

1. A Large Artificial MAGNET,
hich will lift up a child from the ground.

2. A Variety of FOUNTAINS,
me of which play by the help of fire, ſome by the weight of water, and others by the help of different atmoſpheres.

3. Five Philoſophical GLASSES,
hereby he explains the cauſe of the tide, the different colours of light, the weight of water, the ſtrength of ſpirits, the power of heat, and the different circulation of blood.

4. A New-invented HOUR-GLASS,
he ſand will run or ſtop 100 times in an hour, by deſire.

5. A New-invented WATCH-CASE,
Which cauſes a watch to go quicker or ſlower, or ſtop without any perſon touching or opening the watch.

6. A Mechanical BELL,
he hammer of which will ſtrike any hour the company deſire, without the help of a wire, ſpring, or clock-work.

7. A Glaſs MACHINE,
hereby he will diſcover fixt air, from marble, lime, and chalk, &c. &c.

8. An Horizontal DIAL.
Whereby he explains the cauſes why many ſhips are loſt that might be ſaved.

9. An Electrical MACHINE,
n the neweſt conſtruction, with a great variety of new aparatus.

10. A New-invented APPARATUS,
Whereby he will explain the greateſt mechanical powers.

11. Two Mathematical SCALES,
y which he will diſcover how to make a guinea appear ſix or ſeven grains heavier in an inſtant, in any ſcales.

12. An AIR-PUMP,
With a great variety of curious aparatus.

13. New Experiments in NAVIGATION,
ſt. To make a true reckoning by throwing out a long line, and knowing from the ſun how much time a watch gains or loſes in cloudy days or nights. 2dly, In like weather to find the north and ſouth pole at ſea, without a compaſs needle

14. Celeſtial and Terreſtrial GLOBES.
The neweſt improved.—Their uſe too tedious to mention.

15. An OPTONIUS,
Whereby he will diſcover the greateſt powers of optics.

19. A ſmall Magnetical DIAL.
Which will diſcover to him what hour a gentleman ſets his watch, without ſeeing him ſet it or aſking any queſtions.

17. A Curious CLOCK,
Which has ſurpriſed moſt watch-makers in Europe.

18. A Magnetical APPARATUS,
Which will take a copy off in five minutes time.

19. A large Compound MICROSCOPE,
That will diſcover many curious objects in natural hiſtory.

20. An Optical APPARATUS,
Which will prove that a perſon does not ſee an object at one hour of the day in the ſame manner as he does at another.

21. An ORRERY,
By which he explains the movement of all the planets and ſatellites.

22. Two New SCALES,
That work eaſily in geometry, architecture, fortification and navigation.

23. Four different MIRROURS,
Which will diſcover great powers in optics by the help of the ſun.

24. An AIR GUN,
Which will go off 20 times at one charge.

25. A Marine COMPASS,
Whereby he explains the foundation of loadſtone and magnetiſm.

26. An ELECTROFORUS,
Whereby he will diſcover fire without friction that is equal to electrical fire.

27. A CAMERA OBSCURA,
Whereby a town or city may be ſeen in minature.

28. An ANOMORPHOSIS,
Which viewed at a proper diſtance, will appear regular and in due proportion.

29. A New-invented REFLECTING TELESCOPE,
Whereby a perſon may obſerve an object in cloudy nights as well as day.

30. Six different PHOSPHORUS,
Whereby he explains many curious and ſurpriſing experiments.

31. A Model of a MILL,
Which will go without water, ſprings, or clock work.

32. A Diamond BEETLE,
Which will diſcover the greateſt wonders of natural hiſtory.

33. A very Large LOADSTONE,
Of above 49 pound weight, which has been valued by the learned and curious, to be worth above 200 Guineas; whereby he will ſhew the greateſt power of attraction and repulſion, on iron and ſteel, and the compaſs needle, it's like is not to be met with in the three kingdoms.

34. A new-invented DELINEATOR,
By which he takes exact likeneſſes in minature.

35. A Model of a HOUSE,
Whereby he explains how a thief may be catched or killed when robbing a houſe.

36. A Reflecting TELESCOPE,
Whereby a perſon may ſee all the planets and ſatellites.

37. A Magnetical CLOCK,
Which has ſurpriſed moſt of the free maſons in Europe, and it is expected will alſo ſurpriſe thoſe in this place.

38. A NONIUS,
Which is capable of diſcovering the variation of the compaſs needle in different longitudes.

39. A very Curious LOCK,
That will throw out 24 different bolts at one time.

His Evening LECTURES

Begin preciſely at ſeven o'clock, and continue two hours, and his SOLAR MICROSCOPE Exhibition one hour.

A Subſcriber's Ticket for 12 different Lectures is One Guinea: for 6 different Lectures 10s. 6d.—The Tickets are transferable.

Non-Subſcribers pay Front Seat 2s. 6d. for a ſingle Lecture. Back Seats 1s. for Servants. The ſame admittance for the Solar Exhibition.

Every clear day, at 11. 12, 2 and 3 o'clock, he will ſhew by his new-invented grand Solar Microſcope, above 50,000 live inſects in a ſmall drop of vinegar the ſize of a pin's head, and large as eels; alſo above 40,000 live inſects in a drop of water, ſome as large as rats and mice, alſo inſects in beer, milk, &c. and a live flee as large as an ox, and mites in cheeſe as rge as Cats. Likewiſe many chryſtallizations of ſalts, and 80,000 other uncommon objects, likewiſe live inſects in flour, Mareſchal powder; he will alſo ſhew the effects of Arſenic, d Mercury Sublimate, how they operate upon a perſon; alſo the goodneſs and badneſs of a perſon's blood; alſo the effects of medicines, and how to eſcape various diſorders and diſſes; likewiſe the badneſs of ſome lancets, which often prove very dangerous to Ladies and Gentlemen, and how to prevent a perſon from having the tooth-ach; alſo the fixed air in the arious minerals and metals, and how to preſerve valuable flowers, trees, and vegetables, from inſects and deſtructions in gardens, and hot-houſes; and how the ſpirits kill the inſects in ater, beer, milk, &c. alſo a curious experiment with a candle and poker.

Dr. KATTERFELTO will ſell for 2s. 6d. ſuch a quantity of Phoſphorus, which is better in ſome houſes or ſhips than 100l. as many lives may be ſaved by it. Dr Katterfelto makes d ſells ſix different ſorts of Phoſphorus. He cures perſons who are afflicted with nervous diſorders, hardneſs of hearing, rheumatic ague, paralytic diſorders, and ſuch as have weak ves, and ſeveral other complaints.—Magnets ſold from one Shilling to a Guinea. Alſo a new-invented Powder that will light a pipe, candle, gunpowder, &c. The bottle is two Shillings. he doctor has lately made a moſt valuable Tincture for ſprains, bruiſes, and rheumatic pains, which never faile curing. The bottle is five Shillings. For two Shillings, a bottle of Tincture r the Tooth-ach, that never fails curing inſtantly, may alſo be had of the Doctor.

Dr Katterfelto has lately diſcovered a new-invented HYGROMETER, which may be truly called a perpetual motion, its action being continual night and day, according to the grees of heat and cold, dryneſs and moiſture; it will alſo diſcover when clouds are 3 or 4 miles diſtant, and will tell a quarter of an hour before it rains. They are prepared and ſold r 2s. 6d. by him, and are about the ſize of a pocket watch. For 2s. 6d a new-invented FIRE-MACHINE may alſo now be had of him, which will light a match or candle at land ſea, winter or ſummer, and tell in the dark what the clock is by a watch. The above Hygrometer and Fire Machine are well calculated for gardeners, farmers, and gentlemen travellers.

*** The Doctor will alſo teach any Lady or Gentleman, on very low Terms, in private, all thoſe arts that are now exhibited by Comas, Pinette, Jonas, Breſlaw, and Boaz, which ey ſay they would not diſcover for 500 guineas; alſo that optical experiment called Senſes Deceived And for 1s. he will Magnetize any Lady's or Gentleman's Knife by the help of s ſtrong Magnet, and explain to them, that the ſame Knife afterwards is worth more than a hundred Guineas, at ſome particular time.

moſt power from his very ſtrong Magnet to every Mariners Compaſs, and other Needles made uſe of in Coalpits, &c.

☞ And as many Ships and Lives, has been loſt at Sea by the badneſs of Compaſſes; for the benefit of Mankind, the Doctor for two Shillings and for one Shilling will give the

§§§ Every Cloudy Day from 11 till 6 his Mechanical Muſeum, and very large loadſtone and Diamond Beetle may be ſeen at 1s. each Perſon, alſo many inſects by his compound Microſcope.

This and every Evening this Week, his Lecture begins at Seven o'Clock, at the Philoſophical Society Room, in St Nicholas' Church-Yard.

TICKETS for the Day's or Night's Exhibition may be had at the Lecture Room.

3500
Sept 25th 1798.

necessity which many students were under of devoting the summer months to agricultural avocations. True that Anderson's Institution was not a University, but the greater includes the less, and in all probability there was some kind of concurrence between it and the greater body in the date and duration of the vacations. No doubt it was the fact of Dr. Garnett having more leisure in the summer, and not the idea that the light and bright days are best adapted for indoor pastimes, which led to the request for lectures at that special season. Arrangements were duly made that he should deliver three distinct courses of a less exciting but more purely educational character than those of "Dr. Katterfelto, M.D.," in July, August, and September, 1799. They were to be—

I. A Course of not less than Fifteen Lectures on the principal subjects relating to Mechanics, Hydro-statics, Optics, Astronomy, Magnetism, and Electricity. Transferable Tickets, each admitting a Lady and a Gentleman, at One Guinea.

II. A Course of not less than Thirty Lectures on Chemistry, and its Application to Arts, Manufactures, and Agriculture. Tickets as before at Two Guineas.

III. If desired, a Course of Lectures on Botany.

But none of these lectures were delivered. When the arrangements were well forward, Dr. Garnett was prevented from coming by a severe domestic affliction, and shortly afterwards he received an appointment at the Royal Institution, which had just been opened in London, and his consequent removal from Glasgow "prevented the execution of this most desirable project."

In the Annual Report presented in 1802 mention is made of "the numerous and punctual attendance lately given to the Lectures we have heard on that interesting Science, Chemistry," and the hope is held out of "a course of systematical Lectures" upon the Society's already famous mineralogical collection. I have not yet been able to find anything further about the chemical lectures referred to. "An address to the Public, from the Literary and Philosophical Society of Newcastle-upon-Tyne," published on June 2nd, 1802, speaks in a note of "the judicious and accurate lectures delivered by the late Dr. Rotherham on several branches of Natural and Experimental Philosophy, (which) greatly contributed to excite a taste for these important investigations among his fellow-townsmen and neighbours." Dr. Rotherham died in 1787.

There is sufficient to show us that Newcastle was one of the first places to feel the stirrings of that new spirit of patient inquiry and investigation which was to revolutionise the whole scheme of education, and to produce results upon actual life which have made this nineteenth century, for good or ill, unique amongst the centuries of the world's life.

It seems quite an appropriate proceeding that, on the 4th May, 1802, Mr. Thomas Bigge, one of the Society's Vice-Presidents, should read a paper "On the expediency of establishing, in Newcastle-upon-Tyne, a Lectureship on subjects of Natural and Experimental Philosophy, etc." In it he pleads for regular experimental courses of scientific lectures, and points out that "the town of Newcastle is singularly fitted to become the seat of a Philosophical Institution." He goes on to say:—

"We are placed here at a considerable distance from any part of the kingdom where Experimental Philosophy is systematically taught. The Scotch Universities are least remote: yet to them it is evidently impossible for a great

majority of those persons to resort, who wish to acquire a knowledge of the sciences most applicable to the various concerns of life. When we consider the expence of long journies, and of a residence at these places, and the inconvenience of absence to persons who have a daily employment, it will appear that the miner, the mechanic, the manufacturer, and the agriculturist, can rarely hope to participate in the advantages of experimental science, unless they reside in the neighbourhood of a Philosophical Establishment."

There is deep interest in the fact that, so long ago, Mr. Bigge contemplated scientific education in which working men should receive a share of benefit. This was really advanced and prophetic.

Mr. Bigge speaks of the Grammar School and its excellence under "the late revered Master"—the Rev. Hugh Moises,—and says, "the more frequent union of classical education with elementary science is extremely to be wished." This was in 1802, and in 1891 the Grammar School at length got a chemical laboratory.

Then he turns to the medical profession, and trusts that "the late important addition to the Infirmary" may lead to "lectures on anatomy, on the principles and practice of surgery, and on the science of pharmacy." He thinks that medical students would avail themselves "of lectures in chemistry and other branches of natural philosophy when they see their elders acknowledging, by a frequent attendance, the importance of such instruction." But he carefully disclaimed the idea that Newcastle could or should become a school of medicine which ought in any instance to supersede the Medical Universities.

And when we boast ourselves of the strides which we have taken since the century, whose end we approach so nearly, began, it is well for us to listen to such words as these:—"The

peculiar district we inhabit affords the strongest argument in favour of the proposed institution. There are few countries more interesting to a philosophical eye, and none more indebted to the discoveries of science. Bountiful as Nature has been to us, her gifts would be offered in vain were it not for the aid of the experimentalist. Without mechanics and chemistry, how wretched would be our manufactures, and how worthless the amount of our mineral possessions! Exactly in proportion to the state of these sciences is the condition of the one and the value of the other. So great has been the progress of experimental philosophy, so astonishingly successful its application to our principal manufactures, that superficial observers may think enough has been done for all useful purposes, or that nothing of importance can hereafter be effected. This ignorant surmise is the reverse of truth; for no proposition more clearly results from the progress of discovery than this, that immense desiderata remain to be supplied, and that, with all our rich acquirements, we are still in the infancy of science. Could we compare the state of this district a century ago, or at different later periods, with what it is at present,—could we trace out the authors of every particular improvement, the local importance of philosophical studies would be distinctly exemplified. We should, moreover, at one view, be convinced that, whatever great inventions were bequeathed to us by our ancestors, the knowledge they left was at no period more widely extended, or more variously applied; and that the latest era of science has witnessed some of the most valuable discoveries. What then is the obvious inference from this fact? Undoubtedly, that the more is already known, if proper means be taken for its diffusion, the more rapid will be the advancement of knowledge; and that in proportion to the numbers of ingenious enterprising men enlisted in these pursuits, and to the encouragement held

out by the opulent and great, will be the success of future efforts to perfect what has been left incomplete."

I give this extract verbatim because it is important that we should clearly understand that the primary idea in attaching courses of lectures to this Society was that of educational courses. There was no thought of elegant discourses which should enable the dilettanti to amuse an idle hour, no thought of listening to the author's reading of a magazine or review article, no thought of imparting curious information to curious men and women. Education was the root idea of the scheme from the very first.

Mr. Bigge went on to point out the great value of systematic scientific training to the younger mining pupils; warned his hearers against expecting too much from this or any other plan; pointed out that the details would require the most careful consideration, and that considerable expense must be incurred in providing "a lecture-room, a laboratory, philosophical apparatus, models of machinery, mineralogical collections," and that this could not be met by annual subscriptions alone; and again warned his hearers against aiming at too much at the outset. The conclusion of his admirable paper has so curious an historical interest that I am tempted to give it in full. He says:—

"There is, however, one remaining topic upon which it is impossible to be silent—the restoration of Peace; an event which opens to us not less delightful prospects as lovers of science, than as friends of humanity. The diminution of taxes and public burdens, we may hope, will enable us to experience a liberality of patronage we could not otherwise have expected. Reconciled to a great nation after a long suspension of intercourse, we are about to begin a competition with her of a most liberal kind, in which our interests and our honour are intimately

concerned. May that competition be prosperous and lasting! A rivalship in arts and sciences, in everything that can improve or adorn life, with a people long celebrated for ingenuity in these pursuits, and deriving from their government every practicable assistance, ought to animate us to correspondent exertions, did we, putting interest out of the case, only consider the contest as involving national character. Our own government has not been deficient in attention to science. The late foundation in Albemarle-street, on a scale so magnificent and extensive, is a noble instance of the spirit of the times, and augurs well to our best interests. But the Royal Institution of England, like the National Institute of the Republic, is in one respect limited in its operation. All cannot frequent, for demonstration, the metropolis of their respective countries. Provincial establishments are therefore evidently necessary. That associations for this purpose will be formed in both countries, there can be little doubt. The glory will belong to that community which forms them first."

The Peace of Amiens was signed on the 27th March, 1802. England declared war against France on the 18th May, 1803.

After hearing Mr. Bigge's paper, the Society resolved "That the object stated by Mr. Bigge appears to this meeting of great importance to the interests of society at large, and of this district in particular," and an open Committee was formed to meet weekly for the consideration of the matter, and to report to the next general meeting. The paper was printed for general circulation.

In June this Committee's report was presented. Its chief suggestion was "the establishment of a permanent Lectureship in the several branches of Natural and Experimental Philosophy, Chemistry, etc.," the expenses being raised partly by donations and annual subscriptions, and partly by the appropriation of a

portion of the Society's funds. The report also suggested that the Rev. Wm. Turner should be chosen Lecturer, and Mr. Bigge produced the draft of an address to the public, which was read and adopted. It was a short epitome of his paper, and set forth some of the reasons which had induced the Society to pass the resolutions which were duly appended.

Much interest was aroused by the scheme. "At the July meeting it was announced that his Grace the Duke of Northumberland had been pleased to accept the Patronage of the New Institution, and had made a donation of £200 to be applied towards the purchase of an Apparatus; and besides proposed an annual subscription. A report was also made that the Right Rev. the Lord Bishop of Durham had made a donation of £100." It is interesting to preserve the exact words of such an announcement, for they serve to show us how far we have travelled since those old courtly days when a peer was placed upon a special platform, and even learned societies sought for noble patrons. In November, Mr. Turner read "a general Introductory Discourse on the objects, advantages, and intended plan of the New Institution for Public Lectures on Natural Philosophy in Newcastle-upon-Tyne." It was twice delivered on the same day, and was afterwards printed by the direction of the Committee.

The objects which he laid down were threefold :—

First.—To provide for the competent instruction, in the various branches of Natural Philosophy, of those young persons who, from distance, commercial engagements, or other causes, have no opportunity of enjoying the advantages of academical education.

Secondly.—To furnish useful preparatory information to those who are afterwards to pursue their studies in a more regular and scientific way.

Thirdly.—To supply an agreeable and instructive source of entertainment to persons of all ages and of each sex; and particularly to enable those who have made them the subjects of their youthful studies to renew their acquaintance with them in their present improved state.

Having taken this step, the lecturer proceeded to enlarge upon each head in a somewhat ponderous way. At times, indeed, he is not quite so clear as we might wish. Speaking of the need of means of systematic instruction in every great commercial centre, for example, he says that such centre "either is itself the seat of various arts and manufactures, that require a knowledge of Chemistry in their processes, and of the several branches of Mechanical Philosophy, in order to the successful management of the requisite machinery; or, if either with or without these, it be the maritime outlet of an extensive inland district, requires, moreover, the united application of a great variety of sciences and arts, in order to the construction of that most curious and complicated machine, by means of which the productions of the district are dispersed throughout the earth, and raw materials are brought back from every region to give fresh exercise to the inventive faculties of our ingenious mechanics."

You feel inclined to turn back to Dr. Katterfelto's bill to see whether the "most curious and complicated machine" was one of his invention.

After mentioning the lectures of Professor Parish on the application of Philosophy to the arts attended with avidity "by the youth of every rank who resort to the University of Cambridge," and the lectures on Trades and Arts "now forming at Hull under the auspices of an ingenious Honorary Member of this Society," Mr. Turner said a few words about several sciences and their connection with local industries. He

specially mentioned the smelting furnaces lately erected on a large scale for the ores of the Yorkshire coast; "and that the iron-stone itself, which was not formerly considered as a native mineral of this district, has lately been found in a continued stratum by an ingenious member of this Society." He also alluded to "our Glass-works, the most ancient of our manufacturing establishments, and the first of this kind introduced into this kingdom." Electricity and magnetism, which have become of such vast importance in the last decade, he dismisses in a few words. "Electricity," he says, "exhibits many striking phenomena, and illustrates many important operations of nature; and is also capable of useful application in the preservation of ships and houses. Magnetism is of great use in Land and Mineral Surveying, and absolutely essential to Navigation."

Glancing at "the excellent fruits of the instruction" given at the Grammar School, "conspicuous to the whole world in the character and talents of those of our townsmen who now fill, with such distinction, some of the most important offices of the State," he passed on to speak of the moral advantages of the scheme, the danger of leisure hours not properly employed, and he disputed the common objection that "Science and Business are incompatible, and that a youth who devotes his time to study is unfit for a commercial life." Finally, he explained the plan of the proposed lectures in much detail, and gave directions as to the course of reading desirable for those who wished to profit by their attendance.

The Committee were speedily at work collecting apparatus for the purpose of illustrating the different courses of lectures with appropriate experiments, and they raised and expended in perfecting the apparatus nearly a thousand pounds within a few years. The first purchase which they made was that of the Philosophical Apparatus belonging to Dr. Garnett of the Royal

Institution. He had died shortly before this time, and the price paid to his representatives was £455 11s. 9d.

The Apparatus Room, which many of us remember well, always had the effect of being as full of curious and interesting things as could be reasonably expected. It was a place of much resort, and the apparatus was in constant use. The room itself had to disappear when the present Lecture Room was built, and most of the apparatus disappeared sympathetically about the same time. It is possible (I have been told) even yet to discover some fragments in those gloomy cellars of the Society in which so many things of priceless worth have perished, and one or two valuable items are doing good service at the College of Science. The Society is no longer the proud possessor of any part of that which our forefathers spoke of as "an apparatus."

The first course which Mr. Turner gave was of twenty-one lectures, and the subjects which he chose were "Mechanics, Hydrostatics, and Pneumatics." The syllabus was printed and illustrated, and it extended to eighteen pages. The charge for the course was a guinea to ordinary members, but they were permitted to transfer their tickets to any lady or young gentleman under age, being a member of their own family. Non-members had to pay two guineas, but their tickets were freely transferable in any direction. Ladies were only charged half-a-guinea, and young persons under eighteen a guinea. Members who chose to pay ten guineas, or non-members who chose to pay twenty guineas, became entitled to tickets admitting to all courses in perpetuity. The cost of admission to a single lecture was three shillings.

It was no sinecure the post of lecturer to this Society. The demands which were made upon him at first seem to us rather unreasonable. He had to hold forth thrice a week, on Mondays,

Tuesdays, and Fridays, and twice upon each of those days. The early lecture was given at eleven in the forenoon to suit the convenience of country members, and it was repeated for the inhabitants of the town at eight o'clock in the evening. A somewhat similar arrangement obtains, I am told, at the present time with reference to pantomimes. The first course opened on 4th April, 1803, and it was "countenanced" throughout by "a numerous and respectable audience," which afforded "a favourable ground of hope of a continuance of the public encouragement." The need of a new lecture-room made itself felt at once, but it could not at once be satisfied. Indeed, for a number of years the lectures were habitually looked upon as being carried on by an organisation distinct and separate from the Society proper, and this is shown clearly by the following paragraph, which was sent out by the Committee as a companion to the advertisement of the second course in the spring of 1804:—

"*Newcastle, March* 17.

"The facility afforded to an early proficiency in science, by its elements being presented to the youthful mind, accompanied by experiments that arrest the attention by mingling amusement with instruction, is a reflection excited by the second course of Lectures announced by the New Institution (see advertisement), and which, however obvious, is not less important. The approbation that has hitherto attended the measures adopted to establish in this town a permanent and stationary course of instruction in various branches of science, renders general panegyric superfluous; but indifferent or rather adverse as its promoters probably are to its aid, we must be pardoned if, deeply impressed with this particular view of the subject, we desire earnestly to call the attention of the parents of youth to the important advantages they will derive from making that an ordinary and stated branch of the education of their offspring, which they were wont to seek by an expensive residence in a distant capital, or refer to the precarious arrival of occasional lecturers."

There is much to amuse the casual reader in such a passage as this. It sets forth very plainly the powder-in-jam method of education, and its whole atmosphere is fragrant of thoughts and ways which have become obsolete long ago. But to those who have followed the struggles of Natural Science to be allowed an entrance into the jealously guarded and preserved domain of the subjects which may be properly considered educational; who have seen it slowly emerge from the surrounding darkness into great light, until it has at length, not perhaps without something of effrontery, arrogated to itself upon all occasions, as the originators of our lectures did upon this, the universal name of Science, as though it would, in its turn, declare

"What I know not is not knowledge;"

to those the marvel is that, at the very beginning of this pre-eminently scientific century, our fathers were so far in advance of the average mind of their time as to propose that Natural Science should form "an ordinary and stated branch of education."

When the third course had been delivered, the donations and subscriptions received for lectures, up to that time, amounted to £1,195 19s. 4d. The purchase of apparatus I have already spoken of, and Mr. Turner had been paid two hundred guineas for each of the two first courses, and £157 10s. for the third course. The lectures were called the New Institution, and the accounts were kept distinct from those of the Society, and were published separately. This course was adopted because of the suspicion with which some members regarded the movement from the commencement, and their erroneous belief that it was solely supported out of the general funds of the Society.

Indeed, there had been considerable opposition to the New Institution from the very first. A large number of the members cared for nothing but the Library, and they looked

upon all assistance rendered to the lectures as an actual loss to the Library. Open war broke out in 1808, and raged for some three or four years. The part played by Mr. Turner himself was invariably judicious, conciliatory, and dignified. Pamphlets were poured forth; poetical effusions, from which the poetic element was conspicuously absent, were scattered broadcast; the local press was appealed to; and anonymous letters were circulated. Such a pother and a racket over the lectures and the lecturer. It is difficult to wade through the floods of rubbish now. The fun can never have been funny, but some of the disputants would seem to have been in earnest, although they betray more anxiety to wound their antagonists than to convince them. There is bludgeon play of a coarse and vulgar type, but no rapier flashing. Some of the attacks are impertinent and disgraceful. The fact that Mr. Turner was a Unitarian minister is paraded as though it were in itself a reproach. But patience, dignity, and moderation, carried the day, and, at many largely attended meetings of the Society, the Lecturer received abundant proof and frequent assurance of the confidence and gratitude felt towards him by the overwhelming majority of the members.

But there was one ground of complaint which was altogether reasonable. The lectures were delivered in the Library itself, and this was manifestly unfair to those subscribers who wished to sit and read without being talked to all the time. Mr. Turner immediately admitted the force and justice of this complaint, and in 1809 he made arrangements by which the lectures should thenceforth be delivered in the Concert Hall in the Bigg Market.

But there was one serious loss to the Society involved in the great gain of the New Institution. It was a personal one, but such are often, in one sense, the most serious of losses, for they are irreparable. Of course when the choice is between the

satisfaction of an individual and the benefit of the Society, the individual, however important, must give way. It is hard, indeed, when any one has worked for long years in the Society's service, that his earnest wishes should be set aside, but this is incident to the very existence of such societies, which would otherwise exist at the will of a dictator. Difficulties of this kind are incident to all institutions of voluntary association, and the freer their constitution, the more complete the equality of their members, the more certain are such troubles to arise frequently.

Mr. Moises took a somewhat active part in opposition to the New Institution. He joined Mr. Beilby, who led that opposition, and there was a strong attempt upon their part to put an end to the lectures. At length Mr. Moises wrote Mr. Turner, explaining that he had asked Mr. Marshall, the Librarian, that a special meeting of the Committee should be called to take into consideration the objections which he and his friends would then bring forward "to the Connexion at present subsisting between the L. & P. S. and the N. I., and the consequences that are likely to result from a continuance of such connexion." He added that as Mr. Turner might feel it not pleasant to attend such meeting, he should be glad to meet him in the interim, either alone, or each accompanied by a friend, "in order to state to him openly and explicitly the light in which Mr. M. and his friends view the subject alluded to."

But Mr. Turner was unfortunately leaving home by the next day's mail, and could not make an appointment. He wrote Mr. Moises an admirable letter, in which he said that "he would have felt nothing unpleasant in attending any meeting at which the question of the Institution was to be discussed; having had no concern in the original proposal, having sought no appointment in it, being conscious of no blame, though of much imperfection, in the discharge of the office assigned him, and

being very ready to resign that office whenever the Society shall intimate a wish to that effect."

One of the many long unsigned letters which appeared in the newspapers about this time seems to have greatly aroused Mr. Moises' ire. The correspondence I have mentioned above was apparently of February's date. The letter last spoken of was dated the 3rd March, 1809, and it showed the improper part which Mr. Marshall, the Librarian, had taken against Mr. Turner, and traced the rather strange and under-hand action which Mr. Beilby and others had taken. In a note to this letter (which was printed and circulated) it is observed, "Even the Rev. Mr. Moises, who attended the last meeting, to give notice of some counter-resolutions, with a degree of candour which does him honour, consented to withdraw his opposition." For some unknown reason this seems to have stirred the worthy pedagogue to fury. Under the date of "Spital, March 7th, 1809," he writes to Mr. Turner :—

"Revd. Sir,

The perversion of facts, which have been published by those who advocate your cause, and the abuse of my name, and my motives by your immediate Friends, I have smiled at,—but now that I am become the object of their nauseous Compliments, and my Candor admired in a case, which *you know* never existed, my mind revolts from such a system of low trick and vulgar chicane; and I should feel myself out of my proper place were I ever to appear in your Society again.

As I am ignorant who the proper Officer is to whom I ought to send my Resignation, I must entreat you to do me the favour of erasing my name from the list of Members.

I am, Reverend Sir,
Your most obedient
and very humble Servant,
EDWD. MOISES."

That is a letter which should have gone into the blotting-pad, not into the post-office. The President well described it as a "strangely un-gentleman-like passionate Letter." It was read at the next meeting. Mr. Moises and his friends made a half-hearted attempt to form a rival library, but it came to nothing, and the storm passed away.

And now, in the Reading Room, benevolent Mr. Turner and irascible Mr. Moises contemplate each other from morning to night every day with perfect equanimity. But before I happened upon this correspondence, I never looked upon their portraits without at once thinking of the ingeniously twisted cruets out of which you can pour at pleasure oil or vinegar.

In the report presented at the Annual Meeting in 1816, the Committee "embraced the opportunity of noticing that the New Institution continued to answer all the purposes for which it was originally designed." They then go on to say, "This interesting branch, which received its existence and its nurture from the Society, has in its turn eminently contributed to support the credit and to extend the usefulness of the parent establishment. The Committee may be pardoned for remarking here that by respectable strangers, whose capability and means of judging were undeniable, flattering testimony has been repeatedly borne to the superior intelligence and attainments of the inhabitants of Newcastle. This reputation, so honourable to the place in which we live, the partiality of the Committee would dispose them to refer partly to the influence of the Society, and partly also to that free spirit of enquiry and desire of improvement which public lectures are so well calculated to bring forth."

And partly, I fear, to buncombe. What large town did those "respectable strangers" visit next, and what did they say of the intelligence and attainments of its inhabitants? I think that nowadays we all know those "respectable strangers." But

THE REV. WILLIAM TURNER.

we are always glad to meet them, and ready to receive and acknowledge their good opinion.

"What ardently he wished, he long believed."

And it is so soothing to think that we are not exactly like other men. Only the very day upon which I write this a letter has appeared in the London press from no less a person than the brand-new "Poet Laureate," in which he clearly shows that, if a bad poet, he is a good patriot. He says that for the United States to declare war upon England would be "an awful crime," but that for England to declare war upon the United States would be—"an appalling responsibility." How admirable an arrangement it is that no power exists which can give us the art of seeing ourselves as others see us!

The report of which I was speaking, before I was led to digress and transgress, states that the attendance at the lectures had "of late years been considerably on the increase."

The Rev. Mr. Turner continued to hold the office of Lecturer to the Society until the year 1833. He gave each year either one or two courses of lectures, from twelve to thirty-two lectures constituting a course. His subjects, besides those which I have already mentioned, included Electricity, Galvanism, Magnetism, Chemistry, Optics, Astronomy, the Philosophy of Natural Appearances, Botany, the Philosophy of Natural History, the Animal Kingdom, the Vegetable Kingdom, the Mineral Kingdom, and the application of Chemistry to the Arts and Manufactures, Domestic Economy, Agriculture, etc. "In the drawing up of each course," he explained, "his aim was to be sparing of mathematical formulæ; to take his illustrations as much as possible from common and obvious appearances; to apply the principles laid down to the explanation of the machines, etc., most useful in this district; and to lead his hearers to remark

and admire the benevolence and wisdom displayed in the works of the Creator."

When the present building was completed and opened a change was made in the lecturing arrangements. Thenceforth the Lecturer was to receive £50 a year from the funds of the Society, and the members were to be admitted free to the annual course. For the course, non-members were to pay a guinea each, and ladies and young persons under twenty-one, half-a-guinea, whilst the admission to a single lecture was to be half-a-crown. All expenses were to be defrayed out of the sum received for tickets, and the balance was to be handed over to the Lecturer. The lectures were to commence in the first week of the month of October in each year, and the subject of the intended course was to be announced at the preceding annual meeting.

In 1833 Mr. Turner resigned the position of Lecturer, which he had held for thirty years. He gracefully thanked the Society "for having been allowed for so many years to discharge, however imperfectly, the duties of that office. Finding, however, that his other numerous engagements prevented him from keeping up with the rapid march of science—chemical science more especially—he thought it his duty to resign."

He had undertaken an enormous task, and had loyally performed it to the best of his ability. Our gratitude is due to him for the work which he did, and not less due to him for the fact that he knew when, owing to the increase of scientific research, and to more perfect specialisation, he was no longer able to do it.

Mr. Turner was the father of the Society, and continued to act as one of its Secretaries until the year 1837, when he retired from that office and became a Vice-President. He left Newcastle in 1841, and a special meeting was held in September of that year, at which it was resolved "that the long-continued

and inestimable services which have been rendered by Mr. Turner, in the formation or encouragement of our various institutions, for the promotion of Science, Literature, and the Fine Arts—the improvement of education, and the purposes of charity and benevolence, have justly entitled him to some mark of public respect and gratitude, on his retiring from public life, and ceasing to reside among us."

It was resolved further that it would be most acceptable to him, and most conducive to his comfort in his retirement, to raise a sum of money by public subscription to be applied as seemed most advisable for his benefit.

CHAPTER X.

LECTURES—Continued.

IN my last chapter I followed the lectures which have been given in connection with the Society from the earliest date to the time when the Rev. William Turner ceased to hold the position of Lecturer. I did not, however, mention that lectures other than his had already begun to make their appearance.

So far as I have been able to ascertain, the first of these were given by Robert Bakewell, Lecturer at the Russell and the Surrey Institutions, London, and were a course of ten Geological and Mineralogical lectures "to elucidate the Natural History of the Earth and its Mineral productions." They were "illustrated by Experiments, Mineral Specimens, and numerous original Drawings and Sections." Tickets were to be had at the rooms of the Literary Society, and cost for the course—Gentlemen, £1 5s.; ladies, £1 1s.; tickets including the resident members of the family, not exceeding five, £3 5s.; single lecture, 4s.

Next came Mr. Sadler, who "respectfully announced to the Ladies and Gentlemen of Newcastle his intention of delivering a Lecture on the History, Theory, and Practice of Ærostation; in which will be explained the Methods of constructing and inflating Montgolfier and inflammable Air Balloons, illustrated

by Models which will be made to ascend in the Lecture Room." Here again our Society sold the tickets, which were 3s. each, but would admit two young persons.

Then Mr. T. Longstaff, a member of the Society, began a course in September 1814, at the Joiners' Hall in High Friar Street, where Mr. Turner's lectures were, at this time, delivered. Tickets were to be had for the "Course of 6 Lectures on the sublime Science of Astronomy" at the principal booksellers and the Library of the Literary and Philosophical Society. Six transferable tickets cost 14s., and single lectures 3s. each.

But these all seem to have been independent ventures, only countenanced by our Society. The earliest course which the Committee acknowledge in their report is thirteen years later. In March 1827, Mr. Henry Atkinson gave a course of ten or twelve lectures on Astronomy, half-a-guinea being charged for the course, and two shillings for a single lecture. The advertisement says, "As these lectures are principally designed for the benefit of young people, all complicated calculations and intricate mathematical demonstrations will be studiously avoided by the Lecturer."

Mr. Henry Atkinson was one of those Redesdale mathematicians who made Woodburn so famous at the beginning of this century. Many a learned paper on higher mathematics and on deep astronomical questions did he lay before the Monthly Meetings of the Society, whence some of them found their way to the Royal Astronomical Society, by whom they were published. He was one of the Rev. William Turner's congregation, and an active member of the Committee of this Society for eleven years. He died in 1829 at the age of forty-eight.

But other lectures of a more philosophical type also began to make their appearance. The son of the founder of the Society, and himself called the Rev. William Turner, who was

a minister in Halifax, gave a course, during the winter of 1830, upon "The Origin and Progress of Civil Society." It is exceedingly difficult to ascertain with any certainty what was done at this period in the way of gratuitous lecturing by members and others, for the allusions which the Committee make to the matter in their reports are meagre in the extreme. Thus, for instance, we find, under the date of May 3rd, 1831, the following entry: "Mr. Arnaud gave notice that he should be ready to commence his Lectures on Political Economy on Monday, the sixteenth of that month. It is greatly to be regretted that the attendance was not such as might have been expected from the acknowledged importance of the subject, and from the very able manner in which it was treated."

In 1895 Political Economy was a tabooed subject for our Society. A number of the members had formed a small association to study the many vitally important questions with which this invaluable science deals, but there was so much opposition to it from some members that the Committee thought it necessary to prohibit the meetings. Surely "we are not better than our fathers!"

In that same report for 1832 we read that, upon July 21st, 1831, Mr. T. M. Greenhow delivered an elaborate lecture on the Structure and Functions of the Eye to a numerous audience. But the most important event in this line was the giving of the second part of the regular course "on Magnetism, Electricity, Galvanism, and Electro-Magnetism, by Mr. H. L. Pattinson, Assay Master of the Greenwich Hospital at Alston; a gentleman who has paid great attention to this very important, though, in many respects, novel subject; and whose Lectures may therefore be expected, from his known abilities, to be very interesting."

But that grim Asiatic fiend, cholera morbus, was amongst us, and created great consternation. In three months 937 people

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were attacked in Newcastle by the disease, 306 of whom succumbed to it. I think that not even the tales of woe which in childhood many of us heard from our parents, who had taken their part in combating the dire foe, so called up before our minds the beleaguered state to which our town was reduced as does the simple entry in the report of which I am speaking: "In consequence of the disturbed state of the public mind, engrossed as it has necessarily been by the present awful visitation, it has not been thought expedient to commence the Lectures till Monday, the 22nd January" (1832). I cannot tell whether they were actually given then, but Mr. Pattinson certainly gave a course of six upon the same subject, and in March of the same year, to "a numerous and respectable auditory, who warmly testified their admiration of the perspicuity of the lectures, and the precision with which the illustrative experiments were made."

The demand was still rather for courses of lectures than for single ones, and, in 1833, the Committee engaged Mr. James F. W. Johnston, who was Professor of Chemistry in the new University of Durham, to give a course of twenty-two lectures upon Chemistry. These gave universal satisfaction, and they proved so popular that the receipts from them not only paid the expenses, but left a handsome surplus towards the next year's course, so that no contribution was required from the Society. Mr. Johnston had a practical class for students upon the mornings of his lecture-days, and they reaped the greatest benefit from it. He was a man of striking ability, and his work in this district is not yet forgotten. It is pleasant to be able to record that the splendid chemical laboratory at the College of Science in this city bears his honoured name.

The time had now come when it was generally felt that the New Institution should be absorbed by the Society, and accordingly, at the Annual Meeting in 1835, certain alterations were

made in the Laws, one of which declared that "The New Institution shall merge into the Literary and Philosophical Society, the subscribers to the former retaining all their privileges." It was further decreed that lectures should be delivered annually in the Society's Lecture Room, a sum not exceeding £100 a year being expended upon them, and a discretionary power being vested in the Committee as to the sum to be paid to the lecturer, the commencement of the lectures, and the prices of admission. A resolution was also carried that a Sub-committee of seven should be appointed by the General Committee at the first meeting after their election every year from their own body, or from the members at large, for the purpose of managing the Lecture Department of the Society. This Sub-committee was "to enter into correspondence so as to obtain the services of men of talent, and to make every arrangement in connection with the annual course of lectures." The title, "New Institution," continued to appear in the Reports until 1838.

The work was carried out admirably and successfully. Professor John Phillips, then Assistant Secretary to the newly-formed British Association for the Advancement of Science, and Professor of Geology at the newly-formed King's College in London, gave, in the autumn of 1834, a course of twenty-two lectures on "Geology," in "a clear and luminous manner" highly gratifying to his numerous audience. He had also a very interesting and instructive practical class, with which he took various excursions "to the many Geological points with which this district abounds." To understand what this means, we must remember that the science of geology, as we now know it, was still in the process of being formed. Dr. Buckland's "Bridgewater Treatise" had not appeared; Sir Charles (then Mr.) Lyell had not published his *Elements of Geology;* Sir Roderick Murchison was still labouring, "in the field and the

closet," at his *Silurian System;* and the man who, in our young days, did the most to make geology popular, Hugh Miller, had just exchanged the chisel of the stone-mason for the pen of the bank-clerk. It was indeed a great thing for our members at such a time to have such a teacher as John Phillips, amongst those scientific giants "himself not least, but honoured of them all."

But the Committee did not forget that the intellectual man does not live by scientific bread alone, and so they planned a course "on subjects of General Literature." They thereupon "addressed a letter to Thomas Campbell, Esq., the author of 'The Pleasures of Hope,' requesting from him a course of lectures on the Belles Lettres." What a funny sound it has! The poet was unfortunately absent from England. However, Dr. Knott, who was a member of the Society, consented to fill the gap, and he gave six lectures in 1835 gratuitously. They were on "The Laws of Organic and Inorganic Nature, with the particular view of elucidating the Phenomena of Vegetable and Animal Life," and they were received with much approbation by crowded audiences.

In that year (1835) Mr. George Combe, the well-known phrenologist, was the Society's special lecturer. He was a Writer to the Signet in Edinburgh, and had devoted much time and thought to the inquiries of Dr. Gall and his followers into the connection of the mind with physical organisation. He was a clear and polished writer and an admirable speaker. He arranged for three courses: one of sixteen lectures on "Phrenology," one of eight lectures on "Animal Physiology," and the third of seven lectures on "The Principles on which a sound Education should be founded." This third course was to be at noon on Wednesdays and Saturdays. Members were charged half-a-guinea for it, and non-members fifteen shillings, whilst the

admission to any single lecture was three shillings. And this was sixty years ago. I wonder how many single admissions there were at that price: I can guess how many there would be at this day!

At all events the lectures on "Phrenology" were so great a success that they scarcely cost the Society anything. People were impatient to know what stories their skulls told about them. As wee bairns, we were terrified by the horribly neatly-numbered and departmentalised busts and casts which lay in waiting for us in dusky and unlooked-for places in many a Newcastle house. A Phrenological Society was formed to carry the fearful and wonderful study to yet more appalling lengths. It was allowed to meet in one of the parent Society's rooms, and there it kept its casts and models, but its life seems to have been but brief. Even so long ago there were irreverent people who laughed at the whole science of bumps, whilst there were others whose discoveries in their eager search for light in this special direction were curiously suggestive. Thus it was ascertained that ballet-dancers were endowed with the bump of "Tiptoe-ativeness," whilst an unappropriated enlargement on the head of Paganini was duly noted, and was named the organ of "Singlestring-ativeness." The phrenological lecturer appeared even in the pages of *Punch*. He is made to illustrate his discourse by an interesting performance upon a living model, thus:—

"Ladies and Gentlemen, this head presents a conformation
Of Benevolence deficient, with excessive Veneration;
Destructiveness is very large, Acquisitiveness ample,
Of a criminal development this man is an example:
Bow, wow, wow;
This man was executed,
Bow, wow, wow.

He committed the atrocity a little boy of killing
For a silken pocket-handkerchief, a pencil-case and shilling:
For cruelty he oft was fined, had once been tried for arson,
But in Newgate was remarkably attentive to the parson.
Bow, wow, wow,
Highly corroborative,
Bow, wow, wow."

But, like many other popular subjects, this held its own for several years, and, although it has long since been put upon the shelf, there are persons even now who have their bumps duly noted.

There was quite an outburst of lecturing in 1836, and some variety was given by the introduction of literary lectures. The first of these were the work of James Montgomery, then sixty-five years of age. Born in Ayrshire, educated to become a Moravian minister, apprenticed to a grocer at Mirfield, the love of writing drove him out into the great world when but sixteen years old, and there he bravely faced great privations, conquered unusual difficulties, and passed through much persecution. When he came here to lecture his poems had all been published, his political imprisonments lay more than forty years behind, and he had entered upon a calm and peaceful age of lettered ease which continued until the year 1853. Few persons read his poems now, and that is scarcely surprising to those who know them. But in my schoolboy days he stood high in our esteem, and, when we reverently and timorously acquainted him with the fact, the kindly old man condescended to correspond genially and courteously with his boyish admirers. He had lectured in 1830 and 1831 at the Royal Institution upon Poetry and General Literature, and now, when he visited our Society to give six lectures on "British Poetry," he proved so great an attraction that our own lecture-room would not contain the audiences, and the Committee had to hire the Music Hall in

Nelson Street, then some six years old. This led to considerable changes being made in the Society's own room. I need scarcely say that Mr. Montgomery's lectures gave his large audiences great satisfaction.

Then Mr. Robert Ingham, who represented South Shields in Parliament for a quarter of a century, and who was justly one of the most respected men in the North of England, gave a single lecture on the state of education in Ireland. I fear that in these more advanced days it would have been tabooed as savouring of controversial politics! Next came Mr. James Simpson, an advocate from Edinburgh, of whom the report speaks as "an amiable gentleman," and he held a course of eight lectures upon "Educational Philosophy," but they, apparently, "were not under the direct auspices of the Society," whatever that may mean. In the month of May, Mr. John Taylor delivered twelve lectures "replete with research and erudition" on "the Philosophy of the Human Mind."

But the grand treat of all was reserved for December of that year, when the famous scientist, the Rev. Dr. Dionysius Lardner, commenced a remarkable course of twelve lectures on "the Steam Engine, and its application to transport by Land or Water." We are not surprised to learn that he had crowded and enthusiastic audiences. The locomotive and the steamboat were still in their infancy. In 1830 British steam tonnage amounted to 21,600 tons; in 1890 it had increased to more than 5,500,000 tons. The Stockton and Darlington Railway was opened on the 27th September, 1825. Between that time and 1840 five thousand miles of railways were constructed in the whole world, and in 1889 the world contained more than 305,000 miles of railways. Dr. Lardner discussed many things which have long since ceased to be looked upon as problems, such as the superior advantages of atmospheric

railways, the comparative excellence of working railroads by stationary engines or by locomotives, the great gain which would come of alternating gradients, or undulating lines as they were called. He was evidently not a little doubtful of the real powers of the locomotive engine, and broached many a theory which was speedily exploded by the rude logic of experience. In one of his lectures he discussed the practicability of establishing a line of steam communication between Great Britain and the United States. He held that this might be done, but that the direct passage could not be made; the steamers must call at the Azores for coaling purposes! "Great men are not always wise." On April 4th, 1838, the "Sirius" steamship sailed from Cork for New York, and four days later the "Great Western" sailed from Bristol for the same port, both making the direct voyage, and each reaching its destination on the 23rd of the same month.

But if Dr. Lardner did not shine as a prophet, he was, and for many years continued to be, in the front rank as a popular lecturer. His Newcastle audiences are quaintly described as "very crowded and miscellaneous," and, after all expenses had been paid, the Society's funds were handsomely increased by the proceeds of his lectures.

The plan of adjourning to the Music Hall when a lecturer proved more than usually popular was attended by many inconveniences, and it was found expedient to increase the size of the Society's own lecture-room. This was done (as has already been mentioned) by throwing into it two small rooms which had been occupied by the Antiquarian and the Phrenological Societies. It was thus made capable of accommodating nearly five hundred persons, and there was also obtained a private room from which the access to the Lecture Room was easy and convenient. At the same time "a place of deposit

for ladies' cloaks, etc., and a convenient waiting-room for their servants," were provided. That this last item should have a strangely archaic sound speaks volumes as to the entire change of our manners and customs in sixty short years.

Four courses of lectures were given in 1837-38. The first was twelve upon "the Science of Music," by Mr. Thomas Adams, and the Committee say of them that "considering the severity of the season, and the numerous absences necessarily occasioned by the severe epidemic under which we are still suffering, the attendance has been very great." The epidemic was that which has been so much in evidence in late years, our dread foe influenza. The season was indeed severe, the cold being intense and the frequent falls of snow remarkable for their volume. The Committee go on to say: "Indeed, independent of the important observations brought forward, the variety of illustrations introduced, and performed with so much taste and accuracy, have rendered each lecture a most elegant and exquisite musical treat. Mr. Adams, with that public spirit which has characterised the whole period of his residence here, delivered last night an extra lecture, for the benefit of our charitable institutions: the proceeds of which he leaves to be distributed by the Committee." They received no less than £9 13s., which they handed to that useful charity, the Dispensary.

Then Mr. William Warren gave a course of twelve lectures upon the "Principles of Art," and Sir William J. Hooker a course of similar length upon "Botany." These latter lectures produced a profound effect upon the auditors; they were pleasantly delivered and beautifully illustrated, and a movement was started through their influence which had as its object "the having and forming a Botanical Garden in the neighbourhood of Newcastle." The Committee, in commenting upon this scheme, said: "The recreation and delight afforded, in other towns, by

establishments of a similar nature, are a sufficient guarantee that one near this improving place would prosper and flourish. It is intended to render this institution more attractive by afterwards adding subjects of zoology."

Another capital bit of pavement for the only place in the universe where there is already too much of the same sort:

> "Spring calls forth many buds to swell
> Which ne'er may come to flowers,"

and the Botanical Garden is yet in the far future.

But the lecturer for this year who would have been much the most welcome to us was the man who is so disguised in the Committee's report that his own mother would not have known him. Who can "Mr. Knowles, combining in himself, as he does, the powerful orator and correct actor," be? Not, surely not, that curious Irish genius, the author of our childhood's treasures, *The Hunchback* and *William Tell.* Actor and orator indeed, but why not writer of plays, which have a charm and a character of their own, and not a bad one at that? Yes, and preacher too, for he was sometimes called upon to preach, especially in his later days. I used to hear how, when he was a guest at North Shields, in a well-ordered but somewhat strict house, he used to slip away after nightfall to the congenial bar of a convenient public-house, and there unbend until the maids came for him to return and perform the evening devotions. Not that he was a sot, far from it; but he appreciated variety in life.

I need not trace the history of lectures in connection with the Society any further, at all events in so much detail. The plan of having long educational courses was not abandoned until 1847. Dr. Nichol, the author of *The Architecture of the Heavens,* and Professor of Astronomy in Glasgow University,

gave twelve on "The Harmony and Order of Celestial Phenomena," and Professor Rymer Jones, of King's College, London, twelve upon "The Animal Kingdom," both in 1839; Mr. Addams fifteen upon "Acoustics and Optics," and the Marquis di Spineto, of Cambridge, fourteen upon "The Antiquities of Egypt, or more properly on the Worship of Animals, of Polytheism, Mythology, and Idolatry," in 1840; the next year, twelve were given by Dr. Ure on "The Application of Mineralogy to the Arts and Manufactures," and fifteen by Mr. Addams on "Electricity and its related branches;" and in 1842, ten by Professor Macintosh on "Inductive Geology," six on "America" and two upon "India and England" by Mr. J. Silk Buckingham, and twenty by Mr. Addams upon "Chemistry."

But the courses grew shorter by degrees, six or eight, and then three or four, lectures forming an entire course, and the plan of interspersing single lectures was largely resorted to. In 1845 there were indeed three courses—one of six lectures on "English Church Music," by Professor Edward Taylor, the Gresham Professor of Music; one of twelve on "Geology," by Professor Ansted, who had also a Field Class; and the last of twelve on "Agricultural Chemistry and Geology," by Professor Johnston; but there was no course of more than eight lectures, and only a few of more than three, for nearly a quarter of a century from that date.

Members of the Society had begun to take an active part in the lecture work. Mr. James Snape, the mathematical master at the Royal Grammar School, afterwards the Rev. James Snape, its head-master, and an honoured and most useful Vice-President of our Society, made his first appearance as lecturer in the year 1838. His two lectures were on "The importance of the Study of Mathematics, more especially with regard to

their application to the Discoveries in Modern Astronomy." Forty-two years afterwards he was still lecturing to the Society, which he had served faithfully and well during the whole of the interval, filling the offices of Committee-man and Vice-President, and lecturing to it no fewer than twenty-two times. He was an excellent speaker, had a prodigious voice which he used more than was necessary, and was one of the most courteous, kindest, and gentlest of men. There was a considerable likeness in his face, figure, and ways to Professor De Morgan. Portly, good-humoured, wiping away the frequent dew from their spectacles, laying down the mathematical laws with a loud assurance, for a moment losing temper when stupidity was too rampant, but sunshine driving away the storm before it had time to burst; honourable, simple, and genuine; they had much in common as well as their love of the Mathematics. "The man who has mastered the Mathematics is master of everything" was, for many years, one of Mr. Snape's favourite dicta, but he made his Committee brethren roar with laughter as he told them with the utmost naïveté how he had found, by endeavouring to mount a horse for the first time and ride it to Stamfordham, that the rule had not quite the universal application which he had been inclined to give it.

In the year 1844 an interesting experiment was made. The Committee were disappointed by Professor Phillips, who found himself unable to deliver the autumn course of lectures which had been arranged, and they appealed to the members to supply his place. Six gentlemen were forthcoming, and they gave nine lectures amongst them, and had such crowded audiences that "on some of the evenings parties were obliged to go away, unable to obtain admission."

The first of these lecturers was the Rev. James Snape, and he was followed by Dr. Glover, who spoke upon one night on

"Combustion," illustrating his discourse with several brilliant experiments, and "giving an account of a theory which he entertained with regard to the electro-chemical doctrine, and the mode in which the affinities of bodies are explained by it;" and upon another night on "Respiration," in which "he described some of the recently published views and doctrines of Liebig."

Then came "our talented young townsman, Mr. W. G. Armstrong, of the firm of Donkin, Stable, and Armstrong, solicitors of this town, who has risen rapidly into celebrity," and who "gave his very interesting lectures on 'Hydro-Electricity' in a crowded room, to which several were unable to gain admission." These lectures indeed "constituted, from the novelty of the subject and the efficiency of the apparatus he employed, the great attraction of the course." Those of us who recognise in "our talented young townsman" of that day our noble President of this will not be surprised to learn that he was, "from the perspicuity of his language, which was not veiled in technicalities that are only known to the initiated few, perfectly understood by the whole of his attentive and gratified audience. The Committee considered it matter for congratulation that the discovery of this new and most energetic mode of producing electricity should have originated in this neighbourhood, and have acquired its present importance through the researches of one of the members of this Society. Mr. Armstrong's arrangements for the illustration of his lectures were both ingenious and effectual, and his happy manner of explaining the different branches of the subject could scarcely be excelled."

I think that there is sufficient interest about these lectures of more than half a century ago to justify my extracting from the report of the Committee the account which they give of the discovery of Hydro-Electricity. They say :—

"In the autumn of 1840, William Patterson, a workman employed at a fixed steam-engine on the Railway of Cramlington Colliery, being accidentally brought in contact with a jet of steam issuing from a chink in the boiler, was surprised to observe a spark of fire, as he described it, pass from his hand to the lever of the safety-valve, which he was in the act of adjusting, experiencing at the same time an electrical shock, which he represented as somewhat severe. From his report of what had occurred the matter was brought under the notice of several persons, including Mr. Armstrong, who appears to be the only person, excepting Professor Faraday, who has investigated the subject to any extent, or who has arrived at correct conclusions respecting the cause of the electrical excitation. Mr. Armstrong's examination of the boiler on the Cramlington Railway, and his subsequent experiments with others in the neighbourhood, soon led him to the conclusion that similar effects always attended the escape of high-pressure steam. It was ascertained also by Mr. Armstrong, as well as by Mr. Hugh Lee Pattinson, another of your members, that the electricity evolved from the steam was positive, whilst negative electricity was yielded by the boiler when measures were taken to insulate it. Mr. Armstrong's next step was to have experimental boilers and other apparatus constructed, and the results of his investigations with these instruments were published in a series of papers in the *Philosophical Magazine*. Mr. Pattinson also published the result of his investigations in the same work. When Mr. Armstrong first turned his attention to the subject, he was led to believe that the development of electricity arose from the conversion of water into steam, and its subsequent return by condensation to its original state, and that consequently it was a confirmation of the doctrine that the atmosphere is charged with electricity by the evaporation of water from the surface of the earth. As early, however, as December 1841, Mr Armstrong found that the excitation of electricity took place at the point where the steam is subjected to friction, and announced the fact in a paper which he published in the *Philosophical Magazine* for January 1842. He also found, as appears by other papers published in the same periodical, that

the electrical conditions of the boiler and steam cloud might in various ways be reversed, and that the escape of highly compressed air was attended with similar effects to that of steam. In the *Philosophical Magazine* for January 1843 he also states that the intermixture of a small quantity of water was essential to a high development of electricity, and that he obtained the supply of water required for this purpose by means of a condensing chamber appended to the powerful machine which he there described, and which was the first apparatus that had been made deserving the appellation of a hydro-electric machine. In the same paper, and also in that for January 1843, Mr. Armstrong noticed that the quantity of electricity produced depended greatly upon both the form and material of the discharging or frictional passage—that partridge wood was the best material he had tried—and that the form of passage which he there described, and which is nearly the same as that which he now uses in his hydro-electric machines, was highly favourable to the development of electricity. The investigation had proceeded thus far when Professor Faraday delivered a lecture on the subject to the Royal Institution of London. In this lecture the Professor differed from Mr. Armstrong only in stating that the electricity is produced by the water alone being exposed to friction, and that the steam as steam produces no electricity during its emission, whereas Mr. Armstrong had asserted that the accompaniment of a portion of water is 'essential to a high development of electricity,' and that the excitation takes place at the point 'where the steam is subjected to friction,' but without specifying whether the effect arises from the friction of the water alone, or of the steam and water combined. He had also expressed a difficulty in attributing the excitation exclusively to friction; while Dr. Faraday asserted, as a matter of certainty, that friction was the sole exciting cause. According to various reports of Dr. Faraday's lecture, which appeared in different periodicals, he seems to have considered that Mr. Armstrong retained his first opinions as to the cause of the electricity in issuing steam; but it is clear from what has been stated that Mr. Armstrong had substantially arrived at the correct explanation of the subject long prior to the delivery of Dr. Faraday's

lecture. In confirmation of this, it may be stated that the large hydro-electric machine at the Polytechnic Institution in London (the most powerful electrical apparatus in the world), and which was constructed under Mr. Armstrong's direction, upon the principle of exposing distilled water to violent friction in its passage through a wooden orifice, was complete and in operation in Newcastle in April 1843, whilst Professor Faraday's lecture was not delivered until June of that year. It must be stated, however, that in a paper 'On the Electricity evolved by the Friction of Water and Steam against other bodies,' by Professor Faraday, published in the *Philosophical Transactions* for 1843, Part I., the Professor has fully acknowledged Mr. Armstrong's claims, and has referred to all his papers in the *Philosophical Magazine*, as well as to those of Mr. Pattinson. The experiments of Mr. Armstrong and Dr. Faraday have shewn that water as an electric is the most excitable body with which we are acquainted, and that by subjecting it to friction against a rubbing surface of wood, frictional electricity may be more copiously produced than by any other method hitherto employed. Thus the enormous plate-glass machine at the Polytechnic Institution in London, which measures seven feet in diameter, and is worked by a steam-engine of two horse-power, will charge a battery containing eighty square feet of surface in fifty seconds, whilst the hydro-electric machine before alluded to, and also belonging to that institution, is capable of charging the same battery in about six seconds. In Mr. Armstrong's second lecture he announced the following facts, which had not previously been published—viz., that the electricity produced by hydro-electric machines is considerably increased by inserting rods of tin rubbed with mercury in the pipes which supply by condensation the pure water to be discharged by the steam. That the quantity of electricity produced depended in a high degree upon the material of the condensing pipes and the condition of their internal surface; that an iron condensing pipe with an oxidised interior was highly favourable to the development of electricity, whilst the action of the machine was almost entirely counteracted by using condensing pipes of the same material, with a *bright* or *metallic* surface within, and that the electricity

is actually reversed by using a brass condensing pipe and introducing a few grains of a neutral salt, formed by dissolving brass, the material of the pipe, in nitric acid. With respect to these results, and others of a similar nature, Mr. Armstrong justly observed that they were still involved in difficulty, and that their further investigation presented a promising field of discovery. Mr. Armstrong's lectures were illustrated by very beautiful apparatus, and the small hydro-electric machine which he used on the occasion displayed a degree of power which, considering the smallness of its size, was truly surprising. For further information on the subject of hydro-electricity your Committee must refer to Mr. Armstrong's various papers in the *Philosophical Magazine*, amongst which will be found a description of the large hydro-electric machine above mentioned; to Professor Faraday's lecture, which is published in the July and August numbers of the *Repertory of Patent Inventions* for 1843, and to the Professor's paper before mentioned in the *Philosophical Transactions* for 1843."

Is there not quite a peculiar interest in the fact that, forty-nine years after the delivery of these lectures, the same gentleman, now the Lord Armstrong of world-wide scientific fame, was again bringing before the members of this Society some of the results of his original researches into certain electrical phenomena.

In the course of lectures of which those I have mentioned on "Hydro-Electricity" formed part, Dr. Embleton, who is happily still with us, and who has been closely connected with the working of the Society during the greater part of a long and honourable life, followed with two lectures upon "Animal Mechanics"; and Mr. Sopwith concluded the course with two upon "Economic Geology, or the practical bearings of Geological Science on the discovery and working of mines, selection of materials for roads, buildings, etc., and other useful applications of mineral products to the wants and comforts of mankind."

Thomas Sopwith, the learned lecturer, was truly a remarkable

THOMAS SOPWITH, F.R.S.

man. Son of "Sopwith the cabinet-maker"; with little school-learning, but that little given him by one who was, in truth, a master, the mathematician of whom I have spoken in an earlier place, Mr. Henry Atkinson; starting life as a joiner, but striking out into the lines of architecture and land surveying before he had attained to manhood; engaged in great works, laying down of the boundaries of mineral royalties, surveying and planning new highways and railroads, employed as mineral surveyor and adviser by the Government, he yet found time to write and publish a *History of All Saints' Church;* to invent "Sopwith's Monocleid Cabinet"; to study geology; to write a text-book on isometric perspective; and to read papers to learned societies on many subjects, and find out many inventions.

With a man of such great and varied ability it was certain that, as his years advanced, he would ever be in greater demand. And so it proved. At the very time that he was lecturing to our Society he was examining the mineral deposits of Belgium, and was advising the Belgian monarch as to how they might be most perfectly developed. Honours, of much value as such things go, and of unusual variety, were showered upon him, and in 1845 he became the manager or head of the Beaumont lead-mines, residing thenceforth at Allenheads. His long life of unwearied industry and brilliant achievement, in many very diverse directions, did not terminate until 1879.

In the lectures which he delivered to this Society in 1844-45 Mr. Sopwith "gave an outline of the rapid progress of geology in the last and present century, and especially noticed the labours of Mr. Smith, 'the Father of Geology.' He alluded to the influence which the mineral stratification of a country has on climate, and on the distribution of society, which is thereby thinly scattered over the slate and older formations, and densely populous in the carboniferous districts, where the abundance of

coal and iron give rise to manufactures, and furnish employment to multitudes. The duration of public edifices, the improvement of the soil, the goodness of roads, all depend much on geological conditions, a right understanding of which is of great importance to national interests. Mr. S. shewed the relative thickness and super-position of the strata of the British Isles, by moveable models, shewing first their horizontal deposition, their subsequent elevation or depression by subterranean forces, attended with dislocations or fractures of the rocks, forming faults or troubles, and mineral veins. These were followed by denudation or extensive washing away of parts of the surface of the earth, the effects of which were exhibited by several models. The manner in which the British strata overlap each other was explained by a model composed of leaves of coloured paper representing the principal formations. Mr. S. briefly noticed the chief mineral productions of each, and exhibited and explained several geological maps and sections. One of these represented the Bristol coalfield, with the several overlying formations, and was lent for this occasion by Dr. Buckland.

"In his second lecture, Mr. Sopwith applied the general principles which he had explained in the preceding lecture to the illustration of local geological phenomena, which were represented by large coloured sections and diagrams. In describing the great dislocations which occur in the coal-mines of this district he particularly alluded to the great value of the sections of these prepared by the late Mr. Buddle, observing that they rank among the most valuable contributions which practical mining has ever conferred on geological science. Mr. Sopwith explained the vast extent of denudation in the vallies of the Tyne, the Team, Derwent, etc., and at Allendale and Alston Moor, shewing that the great limestone, one of the most valuable depositories of lead ore, has been removed for many

miles by this powerful agency. He exhibited, by means of coloured diagrams, the chemical composition of coals of different quality and of building stone, pointing out the characteristic properties which ensure its permanency, and produced a great number of specimens of rocks, and of their mineral contents, which he had collected in various parts of the kingdom, as the Iron Pyrites of Dover, the Agates, Jaspers, etc., of Aberistwythe, Magnesian Limestone, from Sunderland, and a complete series of the rocks in the important lead-mine districts west of Newcastle. Mr. Sopwith explained the process of making the fuel recently patented by Mr. Wylam, of Gateshead, and an improved German buddle for washing lead ore. Specimens of the fuel were shewn in blocks, and also burnt in the fire-place. He described the Ordnance Geological Survey, the Building Stone Commission, and the admirable, useful, and cheap report of it which conveys a large mass of useful information. The importance of selecting good building stone was shewn by reference to local edifices, and to the restoration of Henry the 7th's Chapel. The connection between Geology and Agriculture was also explained, as were the proceedings of the Railway Section Committee—the Engraved Plans of Dean Forest—the Mining Records of Belgium, and the Museum of Economic Geology in London. Your Committee having directed that free admission should be given to the friends of the members, the room was crowded at every lecture, and on some of the evenings parties were obliged to go away, unable to obtain admission."

Emboldened by their success, the Committee began to think of even greater things. They felt painfully the smallness and inadequacy of the Lecture-room, but they wished to make the very most of it. The two courses of paid lectures delivered annually were not to be interfered with, but the Committee

hoped that, in addition, twelve at least of the many members might be induced to deliver at all events one lecture apiece during the year. "This might be done at the monthly meetings, and the Institution might thus be redeemed from the reproach and unpleasant reflection that the members of the Literary and Philosophical Society of Newcastle-upon-Tyne meet once a month, but only to propose and ballot for new members, whilst the original intention of such meetings, viz., to hear essays on, and to discuss, literary and scientific subjects, is scarcely ever carried into effect."

The hopes of the Committee were not fulfilled: the twelve members willing to lecture were not forthcoming; but for the next forty years there was scarcely one lecturing session in which one or more of the members did not take an active part. It is not possible for me to notice in detail the admirable discourses given by so many of our most distinguished citizens, but those who desire to know who have thus done our Society service will find the names and titles in the complete list of lectures and lecturers contained in the Appendix. The older members will not forget the band of earnest and advanced students of Natural History who have done great service in many directions by their patient and careful observations, adding to the sum of human knowledge, or the antiquarians, historians, and philosophers, whose names are "as household words," and some of the foremost of whom still go in and out amongst us.

But I may properly mention the name of the Rev. Dr. Bruce, whose familiar face and form seem to have passed from us but yesterday, and who succeeded his honoured father as an active worker for the Society. For many years he was one of its Vice-Presidents. Between 1845 and 1881 he lectured to the Society more than thirty times, bringing before it the results of

JOHN COLLINGWOOD BRUCE, D.C.L., LL.D.

his earliest and latest researches into the history of the Roman Wall and of the Bayeux Tapestry, and at times venturing a flight into the realms of science. Some fifty years ago how we young ones trembled as the tall, thin, worthy man raised his air-gun to his shoulder and boldly fired over the heads of his audience at an empty candle-box placed in that which now seems to have been a somewhat dubious place of safety. He was not often over the heads of his audience, many of whom had indeed trembled before the worthy Dominie with better reason, for on this occasion *they* suffered in fear, but the candle-box, alone, in fact. But few had seen the air-gun before that night: the old familiar weapon of woe was not hollow.

For more than forty years, indeed from 1847 to the present time, many lecturers have visited the Society every year, excepting that from 1888 to the autumn of 1892 there were no miscellaneous lectures by gentlemen from a distance. Especially in the fifties, courses by many lecturers upon many different subjects were in great demand. Let me give the Session of 1856–57 as an example. In it the list contained no fewer than forty-five lectures. Mr. P. E. Dove gave two on "The Field Sports of Scotland"; Captain Bedford Pim, one on "The Arctic Regions"; Mr. Crowder, six on "The Manufacture of Glass and Iron"; Mr. George Brewis, one on "The Songs of Scotland"; Mr. Phillips, two on "The Music of various Nations"; Mr. P. H. Gosse, four on "Marine Zoology"; Mr. Henry Phillips, two on "Music"; Professor Nichol, four on "Astronomy"; Mr. John Burne, two on "Drawing"; Mr. Pepper, six on "Light and Chemistry"; Mr. Henry Nicholls, three Dramatic Readings; the Rev. Dr. Bruce, four on "Trajan's Pillar"; Mr. T. P. Barkas, one on "Phonography"; Mr. John Watson, one on "The Moon"; Mr. Gerald Massey, four on "Poetic Literature"; Dr. Dodd, one on "The origin of the names of Places, Rivers, and Mountains,

particularly in Northumberland"; and Mr. Hargreaves, one on "The Fancies of Science."

Ah, those were the days of youth, when indigestion, mental or physical, was unknown, and the bigger the meal provided the better it was liked, especially when quantity and quality were alike good. And you will find it well worth your while to go steadily through the long list of lectures and lecturers. You will find a rare gathering of savants and men of letters, and amongst them many great ones besides those already mentioned, such as Froude, Morley, Seeley, Owen, Huxley, Rolleston, Fawcett, Kinkel, Bryce, Freeman, Creighton, Bishop, Ramsay, Jevons, Wallace, and Deutsch.

The Society which has been able to bring into our city such a host of thinkers and workers has deserved well of the community. Their names show that for more than half a century the people of Newcastle have had the opportunity of listening to the leading representatives of the principal divisions of discovery and thought, whilst the titles tell how many of the lectures delivered to us have taken a permanent place in English literature. This branch of work has in late years devolved to some extent upon younger societies, all of which are either offshoots from this Society, or have received from it sympathetic aid and encouragement. But the proudest boast of our Society is surely that from its own members have come forth a noble line of scientific discoverers, who have brought the fruits of their researches before it, and that the safety-lamp of George Stephenson was followed by Robert Stephenson's boiler improvements; they, in turn, by Lord Armstrong's hydraulic machine and Hugh Lee Pattinson's desilverising process; and in our own day, our townsman and Vice-president, Mr. J. W. Swan, introduced here his incandescent electric lamp when few scientific men looked upon it as other than a pretty toy.

Let me turn now to the accommodation provided for the members and their lecturers.

In the year 1859 the making of the present Lecture-room was begun, and it was completed and the room opened in the following year. It was (as has already been stated) the timely and handsome gift of our then President, the present Lord Armstrong. Those of us who remember the small and inconvenient theatre which it replaced, recognise to the full the great boon which the new room was to the Society. No doubt that at times it has proved inadequate to the accommodation of the audiences which have assembled to welcome and listen to men of the highest eminence, and on more than one occasion the Town Hall has had to be resorted to. But, upon the whole, it has been efficient and sufficient for the purposes of this Society, and for scientific, educational, or literary objects it has been freely lent to unnumbered societies, both such as were of local fame and such as boasted a wider scope.

There are many changes, as years roll on, in the popular demand for lectures, and one of the principal duties of the Committee which manages such a Society as this is to watch the demand, and, noting when and how it alters, to supply to the members that which is desired by the great majority. For thirty years one or two long courses of scientific lectures in each session seems to have satisfied the demand. Then for half a century the desire was to have in each session many lectures by many lecturers. For a long time the audiences were large, were amused or bored, as the case might be, and the cost to the Society was comparatively small. Such cost was in no sense loss; it was part of the proper working expenses of the Society. But very gradually and very certainly the audiences began to diminish. Let us see more exactly what happened.

The present Lecture-room was opened in 1859, and in 1861

the plan of selling season tickets, which were transferable amongst the families of members or amongst the teachers in schools, was tried with considerable success. In 1865 the new room was frequently so crowded that there was great annoyance amongst the members who could not obtain admission to their own room. It is curious to remember that the great subject of discussion was, at that time, the best plan of limiting the attendance at the lectures, and that which was resorted to, and which proved effectual, was simply doubling the price of admission to the more popular lectures. When, in 1866, Mr. J. A. Froude gave three lectures upon "The Times of Erasmus and Luther," the room was packed full half-an-hour before the time for the lecture, and the audience overflowed into the hall, and so crowded it and the staircase as to make access to the building from the street all but impossible. Some fifteen years afterwards, when another distinguished literary man and admirable lecturer gave two lectures upon his special subject, it was with great difficulty that seventy persons could be induced to listen to them.

This serious decline of interest in the miscellaneous lectures was brought by one of the secretaries before the Annual Meeting of the Society held on February 7th, 1882. He read a paper which was entitled, "Some account of the lectures hitherto delivered in connection with the Literary and Philosophical Society of Newcastle-upon-Tyne, together with a suggestion for making them more extensively useful in the future," and the meeting ordered the paper to be printed and circulated. Fuller allusion will be made to this matter in the following chapter, which treats of the Society in relation to education in Newcastle. Here I need only say that the ruling idea of the paper was that the time had come for the Society to revert to the educational courses, not giving up the miscellaneous lectures entirely, but largely reducing their number. This idea

was taken up and given effect to, and, as I have already mentioned, the miscellaneous lectures were abandoned entirely in 1888, and were not resumed until 1892. Since then, the educational courses have been continued, but some miscellaneous lectures have also been given each session and have been fairly well attended.

In the Session 1885-86 an interesting new departure was taken in the form of Lectures for young people during the Christmas holidays. They were given upon six afternoons, Principal Garnett, of the College of Science, leading the way with a discourse upon "Faraday and his Discoveries"; Mr. J. S. Chippendale, Head Master of the Orphan House School, following with two lectures upon "The Breath of Life," and Mr. J. T. Dunn, Head Master of the Boys' High School at Gateshead, giving three lectures upon "Water." There was a numerous attendance, and the audiences were highly appreciative. Similar courses were held in the two following sessions, and gave the greatest satisfaction, as they were indeed bound to do, for they were clear, simple, and forcible, and were admirably illustrated. The young auditors paid much attention and carried away with them much of what they heard. This is shown by the following true story. One of the lecturers had shown the working of the heart and lungs by an ingenious model, which represented the internal structure of the human frame with these organs in actual operation. Amongst the audience who watched this experiment with keen delight was the four-year-old son of a well-known Newcastle gentleman. He had a baby sister at home, and when he returned she was asleep in her cradle in the nursery. The boy was ominously quiet. His nurse at length saw him kneel down by the cradle and carefully lay back the clothes which covered the sleeping child. She at once challenged him, inquiring what he

was doing. "Oh, nurse," he replied, "I'm just going to open Baby to see her heart working." With this laudable thirst for experimental knowledge he had armed himself with one of his father's razors, and was grievously disappointed when he was not permitted to complete the interesting experiment.

There are thus two sides even to the question of scientific lectures to children.

I have now brought the account of the lectures which have been delivered before the Society during more than ninety years, down to the present time. But, having been a listener to them for more than half a century, I may perhaps be pardoned if I indulge in a few reminiscences of the past. In the means of amusement and instruction, young people have now so much choice that they can scarcely understand what the lectures meant to us who were young people when the century was halfway through. They were, practically, the only things of the kind which were available. We had no College, no School of Science and Art, no Evening Classes, no Debating Societies. They were places and occasions at and upon which we met our friends of either sex. Then, at times, there occurred amusing little episodes which created much more diversion then than they would do in these wise and over-crowded days. In a paper read before the Society in March 1859, by Mr. James Clephan, for many years an invaluable member of the Committee and himself a literary man of conspicuous merit, he tells how one evening, when Mr. William Turner was lecturing upon "Mechanics," Mr. Nathaniel John Winch, a useful member of the Committee, but short of stature, kindly undertook to perform the part of bellows-blower. He was patiently and laboriously turning away at his handle, when the lecturer calmly and deliberately addressed his audience thus: "And so, ladies and gentlemen, all this mighty machinery is made to revolve, as you

see,"—and here he pointed in perfect innocence to his crank and his colleague,—"by this simple little winch." And amidst a roar of laughter, which astounded and confounded the unconscious lecturer, poor Mr. Winch resumed his seat.

Then there was the dear old gentleman who must be nameless, but who read his learned dreary discourse in a low monotonous voice, with his manuscript close to his nose, and whose short sight and perfect mental absorption did not permit him to notice that, after a weary hour and a half, only three auditors remained in the hall. How we could ever manage to stop him without accident was a serious question, for we feared the physical shock which any ordinary method of arousing him would occasion. So we gradually turned the gas lower and lower, and this brought him to a full stop some quarter of an hour after the regular time for closing the building had passed. He quietly folded his papers together, bowed to the empty benches, and saying, "Ladies and gentlemen, to-morrow evening we shall resume the consideration of this subject," left the room.

But let us come down into more recent times. With what pleasure do we recall the beautiful hoary head and wise, witty face of our Vice-President, Mr. John Clayton, whose finished language, careful enunciation, and polished manners, spake him a survival of a grand and rare order of men which has quite passed away. What gems of dry humour, and how exquisitely felicitous, were the little speeches with which he would propose a vote of thanks to a lecturer. I seem still to see the sly twinkle of his eye when, after Admiral Collinson's lecture, Captain Palmer, the father of Jarrow, made a few observations upon his own experience in the land of storms and ice, when, in early life and before iron shipbuilding had been dreamed of, he was master of a whaling vessel and visited the Arctic regions. Mr. Clayton made a short but pregnant speech afterwards, and con-

cluded, "Nor must we omit in the expression of our gratitude, our friend and neighbour, the gallant angler of Baffin's Bay."

It was not so much the words which were used, although they were always carefully selected, as the manner in which they were spoken, which gave them their effect. They came forth with a kind of amused hesitancy which cannot be described. The most delicious things cannot: they must be heard or seen, for they cannot be imagined. The Society lost much when increasing years at last succeeded in depriving them of the interest and delight of his presence at its meetings, but, to the closing days of his ripe and charming old age, he retained a keen and warm interest in all its affairs.

He was more than ninety-eight years old when he died, in 1890. Newcastle owes much to him in many ways, but perhaps most of all because he, at an early date, recognised the common-sense, business-like inspiration of Richard Grainger, and was chiefly instrumental in enabling him to carry out some portion of the gigantic schemes which, if fully realised, would have turned the busy little mediæval town into the most majestic city of Europe, and which, even in their incompleteness, have left it, for stateliness of street architecture, without a rival in the United Kingdom.

Mr. Clayton was perhaps, next to the high position which he held as a local lawyer, most eminent as an antiquarian. It was fortunate that a considerable length of that Roman wall which has made our county the resort of learned pilgrims from all parts of the earth, lay within his extensive domains. It was to be measured by miles, and embraced at least three of the most important stations. At the time of his death he had been a member of this Society for sixty-five years, and an invaluable vice-president for fifty-seven years.

Then we had a strange man who came to lecture to us upon

JOHN CLAYTON, F.S.A.

art-subjects, and covered all our great hanging space with photographs and Arundel Society publications, and then proceeded to address his audience, without taking his eyes off his paper, thus: "There was a great painter called Giotto. He was born in 1276, and died in 1336, and he painted many beautiful pictures in churches and other places." Then, without raising his head, but indicating the screen behind him with a backward movement of his thumb, "You'll find several specimens there." The reader can imagine how, when eight or nine "great painters" had been treated of in this exceedingly lucid manner, the audience were too busily engaged in speculating upon the authorship of the multitude of pictures "there" to listen to the slightly monotonous discourse.

Again, from time to time, certain of the lecturers, notably George Dawson and Professor Blackie, singled out individuals in the audience and made them the recipients of curiously personal criticisms or observations. Leaving his desk, Professor Blackie suddenly strode up to the place where quietly sat one of the secretaries, who happened to be a member of the Society of Friends. Then, *apropos des bottes*, he burst out, "Now, you, you are a man of Peace, a Quaker; yet if I were to say that you are a liar, you would knock me down. Serve me right too;" and he returned to his desk with a triumphantly satisfied air, whilst his hearers wondered what it was all about.

One excellent lecturer, a man from a far country, greatly puzzled his auditors by constant allusions to "the loafs of the goats." What were the goats, and how did they come into the subject of the lecture, and what did they do with the loafs? Eat them? But, being interpreted, this mysterious saying resolved itself into the Loves of the Gods.

The lecturers who have had the misfortune to be born in the South, and have therefore never learned to talk English,

have sometimes been at a considerable disadvantage. I remember one highly-cultured and eloquent man who gave an admirable course of lectures, and night after night charmed his entire audience. At last, in an evil moment, he ventured to quote the concluding lines of "the yell of the Forum," from Macaulay's "Virginia," and the consequences were convulsive. It came forth thus—

> "Thou that wouldst mike our midens slives mest ferst mike slives
> of men:
> Twibunes, huwwah for twibunes——"

Neither the quotation nor the lecture were finished.

But these are not the recollections which crowd most quickly and thickly to the mind as it turns back to the nights spent in listening to our visitors from a distance. The brave, calm face of the fearless seeker after truth; the quiet, convincing exposition of some new doctrine; the words of simple but thrilling eloquence; the great teaching, the deep and high thought, the mighty truths which have been unfolded to us, the far-off scenes and times which have been made to live before us,—these are what are uppermost in my mind as I think over the lectures which we have been privileged to listen to. It is good to have looked into the faces, and to have heard the voices, of the men who have spoken to us and taught us, by their words as by their books, many of the lessons which, in life, we have found of the greatest value.

And let me, in conclusion, sum up in figures the lecturing work which the Society has done. In its one hundred and three years of existence (up to the end of 1895) nearly three thousand lectures have been delivered to its members. In 72 of the 92 sessions, since 1803, there have been systematic or educational courses of lectures. There have been, in all, 140

courses of this kind, and they have varied in the number of lectures in each course from six to thirty. The total sum which this Society has expended in this way to meet certain of the educational requirements of this district is not less than £18,000.

CHAPTER XI.

THE PART WHICH THE SOCIETY HAS PLAYED IN THE PROMOTION OF EDUCATION IN THE CITY OF NEWCASTLE.

HOSE persons who have taken the trouble to glance over the earlier chapters of this book must have come to the conclusion that the Literary and Philosophical Society has deserved well of the public of this district. But in no department has it rendered such conspicuous service as in that of education. From the address delivered by the Rev. William Turner when the Society was founded in 1793 to the most recent brochure issued by the Committee more than a century afterwards, the furthering of education in all, but especially in the highest branches, has been held out as one of its principal objects; it is perhaps scarcely too much to say that it was, is, and should ever be, its chief *raison d'être.*

My last two chapters tell the story of the lectures given in connection with the Society, but with one important exception which I shall deal with shortly. This part of the Society's educational work has gone on steadily for more than ninety years, and has been of inestimable value to the town and district. Again, in Chapter VII., I have spoken of the services which, at a very early date, our Society rendered to the cause of primary education. It is not uninteresting to note that it was in the

Society's Lecture Room that a valuable movement was set on foot by members of the Society to establish exhibitions or scholarships from primary to secondary schools; that the managers of the fund raised met to conduct the business connected with it in the Society's rooms, and that, in them, the scholarships were publicly awarded to the successful competitors. This valuable movement only ceased some twelve years ago, when other agencies of a more permanent nature had taken up the work.

But I must trace at some length the endeavours which have from time to time been made by the Society to obtain the foundation of a College at Newcastle, and which, though quite independent of each other, extended over the long space of forty years before they were crowned by success. The history of a struggle of this kind has an interest which is more than local.

The man who began the great endeavour was a doctor of medicine, Thomas Michael Greenhow. He was in large practice, and took an active part in the philanthropic and political work of the town and district. But he was specially interested in education in all its branches, and upon the 5th April, 1831, he read a paper before this Society which he entitled, "The expediency of establishing in Newcastle an academical Institution of the nature of a College or University for the promotion of Literature and Science, more especially amongst the Middle Classes of the Community, briefly considered." It was felt to be of so much importance that the paper was at once ordered to be printed, circulated amongst the members, and more widely distributed.

In this paper, after general observations upon "the advantages of mental culture," Mr. Greenhow went on to state that it was "a remarkable fact that in no country of Europe were

the means of obtaining a liberal and systematic course of academic instruction so sparingly supplied to youth as in England." He spoke of the difficulties in the way of youths of the middle-class at Oxford or Cambridge; the disadvantage of their associating in the same schools with those of noble birth or of unlimited pecuniary resources; the dissipation and temptations of the old-established seats of learning; and the patronage on the one hand, and subserviency and humiliating dependence on the other, which arose out of college intimacies between youths of different ranks and opposite fortunes.

Where then were the middle ranks to obtain "those advantages of education which the general progress of society imperatively demands?" London had an institution in active and useful operation, but London was far away, and was "the last place where a prudent father would be induced to entrust a youth from 16 to 18 or 19 years of age in a great degree to his own guidance." The Scotch universities were neither so distant nor so expensive, but they were local rather than national, "and not likely to be extensively resorted to by English students for the purposes of general attainments only." Then the only thing which remained to be done was to establish for ourselves a college or university where a systematic course of instruction in the higher branches of classical literature, mathematics, and general science, might be accessible to every youth in the middle walks of life.

Mr. Greenhow then went on to show why Newcastle was "the most eligible site" for one of "these marts of literature." It was the centre and capital of a large and wealthy district, and would be convenient to students from several of the northern counties. "In proof that the present time is favourable for such an undertaking, I may likewise refer," he said, "to the liberal character of the existing ministry" (Lord Grey's,

EARL GREY, PRIME MINISTER IN 1832.

and so one of which Newcastle folk might be proud), "and their known desire to promote and encourage the progress of literature, as circumstances likely to ensure for it the countenance of government."

He next discussed some of the stock objections to higher education, and the special advantages of it to the merchant as well as to young men who proposed to enter the professions of law or medicine, and indeed "to all who properly constitute the middle ranks of the community." As to the merchants, he said that it was both probable and desirable that members of the legislature should be frequently chosen from among them. He then turned to the coal trade and to the young men preparing to discharge the responsible duties connected with it, and claimed that this consideration alone "furnished a powerful and unanswerable argument in favour of an Academic Establishment, which could not fail to render more effective and more easily attainable the regular scientific education required by those concerned in the direction of works of such commercial magnitude, and implicating so great hazard to human life." Finally, after noticing how favourable a situation Newcastle was for "a flourishing and beneficial school of medicine" because of "its excellent and extensive hospital, and the numerous other medical charities, which might all be made subservient to the acquisition of valuable practical knowledge," he claimed for his project "the serious consideration of this Society, and of the community at large, as an institution which could not fail to exert the most beneficial influence over the moral and intellectual happiness of the entire mass of population in the North of England; . . . while it would give a great additional consequence to, and shed a glory over, a town which is so rapidly increasing in extent, in beauty, and in commercial importance."

This paper was read at a time when the middle-class were receiving the most attention. It was of higher education for the middle-class that Mr. Greenhow thought, and one of his dreams was that from this class, under a new political system which was about to be introduced, the parliamentary ranks might frequently be recruited. "But that was sixty years ago."

The suggestions which Mr. Greenhow made excited much interest, and upon the 7th June, 1831, he followed the matter up by reading a second paper, in which he went into closer detail. This was also printed by the Society, and was sold amongst the members who were specially interested in the subject, and amongst the general public. A Committee was also appointed to draw up a prospectus of the proposed College, and to issue an address to the public upon the general question.

But very soon after the last date it was announced that a University was about to be started in the City of Durham, and there seems to be some reason for supposing that Mr. Greenhow's activity hastened the development of the Durham scheme. A Bill was passed through Parliament in 1832 to enable the Dean and Chapter of Durham to provide funds for the establishment of an University, and it received the royal assent on the 14th July of that year. It was opened in October 1833.

Whether Mr. Greenhow's activity hastened the advent of the Durham University or no, "the subsequent announcement of a College at Durham" evidently stayed the proceedings of the Newcastle Committee. But in their annual report presented in February 1832, the General Committee of the Society truly say that "the plan of the College there contemplated can not be said to have at all superseded the desirableness of an Institution like that proposed for Newcastle, since many of the objects contemplated by it do not appear to have entered into the scheme of the Durham College, particularly the medical

part of it; and since that Institution is obviously not at all calculated for supplying the wants of the resident youth of Newcastle."

Twelve months elapsed before the Special Committee presented to a Monthly Meeting of the Society held on the 5th June, 1832, the prospectus of a Collegiate Institution, which the meeting ordered to be printed and circulated. I shall speak more in detail of this document shortly, but the chief idea was to start a proprietary College, raising the proposed capital of £15,000 in twenty pound shares. These were to confer the right of proprietorship, and might be transferred or bequeathed, and they were to carry the right of voting in the election of officers, etc., in proportion to the number of shares, ladies voting by proxy, and they were also to give the right of nominating pupils at lower fees.

The notion was that but a small capital was required, because "it seems highly probable, if not quite certain, that the several chairs might be filled by gentlemen resident in Newcastle, who would be at once competent to undertake the duties of professors, and so zealous in the cause as to be induced to do so without further pecuniary reward than what might arise from the admission fees to their several courses of instruction." Mr. Green supplied a plan to accompany the prospectus, and estimated that the "elegant and commodious" building it represented could be erected for £10,000. This is surprising, for it was to contain eight lecture theatres on the ground floor, the largest 40 feet by 26 feet, and the smallest 27 feet by 16 feet; besides a Writing and Arithmetic class-room, 41 feet by 18 feet; two spare rooms, each 26 feet by 15 feet; an apparatus room, 26 feet square, and a Practical Anatomy room, 41 by 18, with the needful offices, etc.; piazzas in front, 338 feet long and 8 feet wide; and, on the first floor, libraries, museums, and the like.

The general scheme of instruction was to embrace every department of literature, and natural and mental science. The studies and students were to be divided into general or preparatory, and specific or professional. The junior classes on the general side were to be "initiated in classical and mathematical studies, in a knowledge of modern languages, in general history, and English literature and composition." The method of instruction was to correspond with that adopted in the High School and Academy at Edinburgh, and seems to have included the much neglected but useful and gentle art of penmanship. The senior classes were to pursue the same studies in their higher departments, but the principles of logic and mental philosophy were to be added.

Upon the specific or professional side, instruction was to be "communicated in full courses of lectures by competent professors." The prospectus goes on: "They will be comprised in the following arrangement—

1. Political economy.
2. English law, ethics, and jurisprudence.
3. Natural philosophy.
4. Natural history, zoology, and comparative anatomy.
5. Chemistry, geology, and mineralogy.
6. Botany, and the physiology of plants.

The two latter must be considered as constituting a part of the course of medical study, which will also comprise :—

1. Anatomy and physiology.
2. Principles and practice of surgery.
3. Principles and practice of medicine.
4. Materia medica and pharmacy.
5. Midwifery and diseases of women and children.
6. Clinical lectures in surgery.
7. Clinical lectures in medicine."

Thus the scheme proposed to carry on the work which is at the present time being performed by the Royal Grammar School, the College of Medicine, and the Durham College of Science.

The newspapers took the matter up, and, whilst criticising many of the details of the scheme, approved heartily of it from the general point of view. Prophetically did the *Newcastle Chronicle* write: "The announcement of the proposed College at Durham may, in the estimation of some, be thought to preclude the necessity of such an institution at Newcastle. We must, however, confess that we are not of that number. The auspices and influence under which the College at Durham has been announced are not what we think will answer the demands and wishes of the neighbourhood and the wants of the country. The exclusive restrictions which it is intended to impose upon the students must prevent a very large mass of the wealthy and intelligent classes of the district from taking advantage of the instruction it offers; while the influence and profession of the individuals by whom it is proposed to be established tend strongly to encourage the belief that it will be conducted too much for theological objects, and we fear in too clerical a spirit, and too much on the plan and in the system of the old-established Universities, to answer public expectations, and supply the wants and demands of the middle classes of the community."

The article from which I have quoted is of peculiar interest, because, while it attacks strongly "the minute labour and high-wrought attention which are bestowed, in the old institutions, on classical learning, it puts in an earnest plea for that which we now call technical education. Utility and applicability to the business of life should be, and must be, their chief objects." "A glorious field is now open to them. It is a disgrace to the country that there exists no institution in it appropriated to

instruction in those branches of knowledge which are requisite to constitute eminence in mechanics, engineering, chemistry, and those useful arts which are necessary for the well-being of all classes—spread around general happiness and comfort, and tend to civilise man. It is from the middle classes, from those who feel the want of it, that such an institution must spring; and why should Newcastle not take the initiative in such an honourable proceeding. Nowhere is such an institution more needed, and nowhere could it be founded in a situation better qualified to attain its object than in this, where those branches of knowledge are so necessary, and where they can have so extensive an application and illustration. It has 'means' enough for a seminary of the highest worth, let but the 'appliances' be meet, and the support adequate, and there can be no fear of the result."

Wise and true words indeed, but we shall see that, when half a century had passed away, and when a College in which the appliances were meet had been provided, the means for its due support were not forthcoming. The chance of being first in the field had, indeed, long been lost, and the chance of being best seems even now remote.

A requisition to the Mayor, John Brandling, Esq., to hold a town's meeting upon the subject was extensively signed, and, on the 24th January, 1833, such a meeting was duly held at the Guildhall, under the presidency of the Mayor himself. Resolutions were unanimously passed approving of the establishment of a College, and a Committee was appointed for the purpose of forming the Joint-Stock Company which it was proposed should carry it on. The Committee set to work to find out what could be done, but its ideal was not sufficiently high. It soon "deemed it proper to communicate to the public its conviction" that a building could be rented and a start made

if a capital of £5000 were forthcoming, and that the fees would, "on a moderate computation, amply suffice to meet the current expenditure of the Institution as well as the payment of the interest of the invested capital."

Such ideas could never bring forth any satisfactory result. The reward of those who labour in the cause of higher education must not be expected in the form of interest on invested capital. It is a mistake to minimise the needs and cost of any educational undertaking. Districts differ in the value which they set upon such things. In some parts of the country there is more public spirit, more readiness to give, than in others. But experience teaches that there is nothing but danger and disappointment in half-measures, and that in matters of this kind it is not infrequently easier to raise £50,000 than £5000.

At all events, the £5000 was not forthcoming. For whatever reason, the scheme did not "catch on," and, notwithstanding the extraordinary interest which had been aroused, nothing resulted from the thought and labour of years. We find Mr. Greenhow reading a paper before the Society in December 1834, on the circumstances which still rendered it desirable to attempt an Academical Institution in Newcastle for the instruction of its youth in the higher branches of education. In October 1835, Dr. George Fife brought the matter forward, reading a paper on the facilities which Newcastle presented for such an Institution, and in March 1836 he carried a resolution that the Society should memorialise the Corporation in favour of an academical institution; and at the same meeting Mr. Greenhow was thanked for his long and persevering exertions, and a Committee was formed which drew up and presented the memorial, and the Corporation appointed an Education Committee. But there the matter ended for some years, so far as a College was concerned.

But Mr. Greenhow made another effort in favour of higher

education, which, although unsuccessful, proved how much he was in advance of his time. In March 1838 he carried resolutions that full and systematic courses of lectures in Mathematical and Mechanical Science, in Chemistry, and in Geology and Mineralogy, with a view more especially to the instruction of persons intended for civil and mining engineers, should be instituted, the Lecturers being appointed by the Society, and having the use of the Lecture Room and philosophical apparatus, but being paid only from the moderate fees actually received. Advertisements were to be inserted in the Newcastle and Gateshead newspapers requesting persons desirous to undertake the duties of Lecturers to send in applications to a Lecture Committee, which would settle all details subject to the approbation of the Society at a General Meeting.

In the report presented at the Annual Meeting in February 1840, the Committee remark that nothing has been done to carry out these resolutions. "Your Committee, however, have learnt with great satisfaction that the subject has been taken up by the University of Durham, where regular college instructions are afforded to students in those branches."

Poor, easily-satisfied Committee! For all practical purposes, so far as the Newcastle students were concerned, such college instructions might as well have been given in the moon.

Indeed, in October of that very year Mr. Greenhow seems to have had doubts of the probability of any action on the part of the University of Durham, for he again read a paper on the expediency of establishing a Collegiate Institution in Newcastle, and at the following Monthly Meeting, assisted by Mr. Joseph Watson, the Rev. D. C. Browning, and Mr. Fenwick, he carried a series of resolutions on the subject. Again there was a Committee appointed to confer with the Town Council, and other bodies were invited to assist, and this Society's rooms were

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offered "for the purposes of the said projected Academy until other accommodation shall be obtained." Nothing of a practical kind was done in the matter, but Mr. Greenhow was not discouraged. In 1844 he read a paper advocating compulsory National Education. In 1845 he returned to the question of a collegiate institution for Newcastle, pointing out "that the means of education for the middle classes were inadequate in this district, in science, and in the higher departments of science and literature, especially that branch of science which related to mining. Every day the operations of mining were growing more difficult and complicated, therefore means should be provided to educate those who have the management of such operations up to the necessities of the situations in which they would be placed, more especially as regards human life and the investment of capital."

On Mr. Greenhow's motion the Government was appealed to, a memorial being presented to Sir James Graham by a Committee appointed for the purpose. The answer received, although not exactly favourable, did not preclude the hope of future assistance. The above-named Committee determined, however, to memorialise the Queen herself on the subject, which was done, and since then the matter seems to have rested. But once again did Mr. Greenhow bring it forward, reading the only paper contributed to the Monthly Meetings in 1849, and upon his pet project. By this time he had come to the conclusion that much more money would be required, if the project were to succeed, than he had at first considered necessary. He died in 1850, eighteen years in advance of his time, but he had done a good work. The cause of his failure was that he had looked too much, latterly, to help from the Corporation or the Government, and did not make a beginning, however humble.

And now, excepting the annual courses of lectures already

fully described, nothing specially educational was done by or in the Society for fifteen years. Then an eminently practical step forward was taken. In the Session 1863-64, the Rev. James Snape, always in the front in matters of this kind, gave a course of six lectures on "The Philosophy of Mathematics," and Mr. J. F. Spencer a course of eight on "Mechanical Engineering"; and in that of 1866-67 Professor Freire Marreco gave a course of twelve upon "Chemistry." But the great impulse towards a more systematic endeavour at higher education came from personal intercourse with one of the most suggestive and stimulating minds of our time, Professor (the late Sir) J. R. Seeley. He gave three lectures to the Society on "Milton" in December 1867, and, in one of the many invaluable private conversations which those who knew him look back to as of infinite worth, he asked his listener, already specially interested in such matters, "why not start a College for Newcastle?"

The idea took root, and some correspondence with certain of the professors at Durham followed, both by letter and personal interview. It was thought that help would come most naturally from those persons in the neighbouring city who were actually engaged in the work of high education. But they at first received the proposals made to them somewhat coldly, which was right and natural, for they were not backed up by any Society or Committee, but were simply those of an obscure individual. At length they said, "If it is proved to our satisfaction that there is a demand for high education in Newcastle, even if it be of that kind which, as has been laid before us, must be chiefly given in the evenings, we shall be prepared to take the matter up seriously, and to bring it before the Senate of the University." Then the next thing to be done was to provide the proof.

At a general Monthly Meeting of the Society held on the 3rd March, 1868, a paper was read entitled "A plan for making

the Society more extensively useful as an educational Institution." It had been prepared, as the writer explained, quite independently and without any knowledge of the earlier endeavours which I have already described. The writer began by describing the systems of education adopted in France and Germany respectively, and comparing them with the want, the entire want of system which at that time prevailed in our own country from primary teaching to that of the Universities. He explained fully what had been done at Owen's College in Manchester, advocating that whilst we should not be able to begin upon so great a scale, yet our aims should be as high. We should exclude no one because of sex or social position, and should contemplate every branch of learning. What we wanted was to move the University of Durham bodily to Newcastle, and slightly to modify its constitution. "I advocate neither more nor less than the establishment amongst us of a College, where instruction of a high and liberal kind in every branch of learning should be given to all who can and will avail themselves of it."

If the thing were to be begun properly, a large sum of money would be required at the very outset. "The only safe and sound plan is to endow the professors' chairs as you found them. This will require a large sum, because the professors must be men who will devote their lives to their subjects, the best men who can be obtained; and if we want such, we must make it worth their while to come and settle in this east wind land. Beyond their value as teachers, there would surely be a gain to us in having added to the few men who are still amongst us of 'the salt of the earth,' others whose presence in our town would give to it a character and tone, for the absence of which no material prosperity can compensate. A little leaven leaveneth the whole lump."

The writer went on to explain that he had brought this subject forward because of some dissatisfaction amongst the members with the position held by the Society, and much desire that it should exert the power for good which was latent in it "Compared with what it once was, as a Society it is dead." The idea was that the Library and Lecture-room might be made of much more general use. "We have here (and they had not in Manchester) ready made to our hand in this and the neighbouring Societies, many of the requisites of such an institution, enough to keep it in active work for many years to come, with very little new building and very little alteration in the old. We have, first of all, upon our own premises, an excellent collection of books, which could at comparatively small expense, without altering our present character as a Lending Library, but with the assistance of men thoroughly competent to undertake the several branches, be made an admirable Library of Reference. We have a Lecture Room so good that I never enter it without a feeling of regret that it should only be used on thirty to forty evenings out of each three hundred and sixty-five; and we have a large space of vacant ground, of use to no one but an eyesore to everybody, which, at but little cost, might be covered with class-rooms and reading-rooms, giving instruction and wisdom, the best and truest happiness, to numbers of earnest men and women. We must not forget how this centre of desolation is surrounded. It is hemmed in on all sides by learned Societies with objects kindred to our own. First, we have the Natural History Society with its noble museum, an honour to the North of England, but requiring extension, and which would be a fortune to any college in the world. With it we must take into account its powerful and important ally, the Field Club, with its five hundred members, perhaps the most living Society in the

district. Then comes the Medical School, which has its own class-room, laboratory, and museum, and is closely allied to the University of Durham. . . . This school, managed as it is by men who belong to a profession more enlightened than any other on this matter of education, we may confidently look to for sympathy and co-operation in any work which has for its object higher and better culture; and some of the classes which are now so ably taught there, and which deal with subjects of general interest, might readily be made available for general students. Coming round, we have that influential and active body, the Mining Institute, perhaps the wealthiest Society to which we can appeal for support; and we must not forget the quiet, unostentatious, but most useful School of Art, which has for many years done good work in an effectual way. But besides these societies, which are collected together here, and which, if working together, have so many of the most important implements which a College needs, there are others outside anxious and striving for better education in their respective specialities; and they would, no doubt, gladly co-operate in the formation of such an institution as would, amongst other good things, afford them this. I may mention that fraternity to which we owe more mental and bodily pleasure and comfort (or, at times, the reverse!) perhaps than any other, the Architectural Association, and I may also mention the lovers of the sadly neglected art of Music, for both of these have been moving in the question of higher and better education in their own walks."

The writer went on to explain that he did not in any way advocate the destruction or vital alteration of any society, or any interference with funds, etc., but simply that each should be ready to contribute its quota to the common cause. He pointed to the character of the time, one of intellectual awakening, of a searching and inquiring present giving promise of a fuller and

wiser future. "With these things going on around us we cannot stand aside. Education,—higher, deeper, wider education,—humbling yet ennobling all,—must come and will come. The question for England to-day is,—in high thought, in true culture, in the better part of life,—will it hold its own amongst the nations of the earth,—knowing that, if it fail in these, the things which are lower will be lost with them; and for us, men of Newcastle, are we ready and willing to do our part in this high and holy labour for the common weal!"

We must remember that these words were spoken twenty-eight years ago; that there was then no general system of primary education; the only secondary school in Newcastle and Gateshead was the Royal Grammar School; there was no College of Science, no University Extension lectures, no Science and Art classes, no recognition of Dissenters at the old Universities, no High Schools or Colleges for Women. We were indeed standing on the threshold of great things, but who could be certain of their speedy advent in that deep darkness which precedes the dawn.

The meeting was largely attended, and was presided over by Dr. Bruce. Mr. T. P. Barkas moved, and Mr. Joseph Cowen, jun., seconded, "That the present Executive Committee of the Literary and Philosophical Society, Newcastle-upon-Tyne, be respectfully requested to constitute themselves a preliminary committee for the purpose of considering the suggestions contained in the paper read by Mr. R. S. Watson, to inquire into the state of middle-class education in the North of England, to suggest a collegiate plan of middle-class education somewhat analogous to that of Owen's College in Manchester, and to ascertain the amount of pecuniary support likely to be obtained in furtherance of such a project." This resolution was carried unanimously; there was some expression of opinion as to the value and need

of the movement, and then, as many members wished to have time to consider the paper fully, it was resolved to print it and to take it into further consideration at an adjourned meeting. This was accordingly done, and the adjourned meeting was held on the 7th April, 1868.

The Committee then reported that they were prepared to recommend that the proposed college should have the use of the lecture-room and reference library upon terms to be arranged, and that if in the meantime a sufficient number of students should be obtained to commence classes in any given department of literature or science, every facility should be given to such classes.

An appendix to the former paper was read, advocating that this Society should at once make an experiment in the way of evening courses of lectures of an educational character, to be followed by examinations. In answer to certain objections on the score of the proximity of the Scottish Universities, the writer replied that they did not wish classes for those who could attend the Scotch Universities, but for those who must get their higher education after seven o'clock at night. This idea being approved, the Committee speedily received offers from seven gentlemen who were willing to take part in the work, and arrangements were made for six courses of twenty-five lectures each, commencing in October 1868, and terminating in May 1869. They were :—

Tuesdays.—CHEMISTRY (Mr. Marreco), 7½ to 8½ P.M. in the lecture-room of the College of Medicine.

ENGLISH LANGUAGE AND LITERATURE (Mr. Spence Watson), 7½ to 8½ in the Society's Committee Room.

ENGINEERING (Mr. Jacob Wallau), 8½ to 9½ in the Society's Lecture Room.

Thursdays.—MATHEMATICS (Mr. T. Dobson, assisted by Mr. W. Lyall)—Junior Class, 7½ to 8½ in the Society's Committee Room.
Senior Class, 8½ to 9½ in the Society's Committee Room.
MUSIC (Mr. W. Rea and Mr. F. Helmore), 3½ to 4½ P.M. and 7½ to 8½ in the Society's Lecture Room.

At the Annual Meeting held in February 1869, Dr. Bruce spoke of the origin of the scheme and its success, and said that he felt sure that it would, ere long, prove the nucleus of a Newcastle University. A letter was read from the writer of the papers, in which he explained that when he brought the matter forward he had not calculated on more than 60 to 80 students in all, but there had been 230.* He pleaded for an extension of the courses, so as to embrace the whole range of subjects required by the matriculation examination of the University of London, and for some guarantee of their permanence, so that the examination might be held here.

In the following session the classes were continued, the Rev. Dr. Snape taking one in Greek. The work began to be recognised outside. The Committee of the Early English Text Society examined the replies to the Examination papers in the English Class and awarded valuable prizes to the successful students. Not only were terminal and sessional examinations held, but a part of each evening was devoted to replying to questions asked by students, and subjects for essays or printed questions were given out weekly and the replies carefully corrected and returned to the students. In the monthly publication which he edited at that time, Professor Seeley had, in

* When the experiment of evening classes was first made at Owen's College, Manchester, they had only ninety-two students.

April 1868, warmly commended the project of the paper. In October 1868, after speaking of the character of the proposed lectures, his paper says: "We heartily wish the scheme success. Newcastle is in fact constructing a University. There is no reason in the world why many such schemes should not be devised and attempted. Why should not other provincial towns essay something for their own intellectual culture? Can no similar good thing come out of Liverpool, for example? Anything so brilliant cannot be generally looked for, but some modest effort might be made. Whatever the success of the Newcastle scheme, the idea is noble. The dimensions of the plan may have to be reduced next year, but we trust the plan itself will not soon become extinct. It deserves to live and to prosper."

Those kind words awaken some sad recollections and reflections. Newcastle has failed to hold its pride of place. The struggle indeed was a severe one, but the plan never became extinct. It was full of life when the College of Science came into existence, and that College took up the struggle and waged it with conspicuous success and against the greatest difficulties. There have been grand teachers and a host of students. Only in this Northern district there have been no wealthy men to do for higher education what the rich men in Manchester, Liverpool, Dundee, or Glasgow have done, or what is now being done at Aberdeen.

Let me continue the story of the struggle. In the year 1870 the Social Science Association held its meeting in Newcastle, and the results of the effort which was being made to establish high education here were made known to them in a paper which explained exactly what had been done up to that time. It then raised the question how this movement was to be extended and made permanent. The writer looked to the old

universities with hope for an answer, and, with all diffidence and reserve, pointed out that the State did not receive from them as much practical aid as it ought to do. The greatest loss was in college fellowships, which were rewards quite out of proportion to any services rendered. "Fellows are highly-trained men, who receive their fellowships as rewards of intellectual distinction, who draw a certain yearly emolument for services which they have rendered to themselves, but who, although frequently young and generally capable, are not required to do anything further in return for those emoluments. . . . These fellows are the very men who are wanted, if they could only be stationed in small bodies in different large towns and required to teach, instead of being retained in large bodies in two small towns, and permitted to do nothing. Say, for example, that a fellow was required to spend the first three or five years of his fellowship in teaching in some large town in which his university had formed a local college; that such town were required to add to the amount usually paid to each fellow one half more, and that he also received a portion of the fees. No more is wanted. No building is necessary. In every large town there are plenty of rooms to be had, and we have had the example in Germany of large universities being conducted without—a university, like a church, being the people who gather together, not the building in which they gather. I need only indicate the great, if indirect, benefit that it would be to our large towns to have a number of men dwelling in them, holding a high position, but not engaging in the mere pursuit of wealth. They would exercise a leavening influence of incalculable benefit, and they would gain by that actual knowledge of their fellow-men, which we who regard the operations of university men afar off sometimes think is their greatest want at present."

With the Newcastle classes there had been many difficulties.

The fee for twenty-five lectures had at first been fixed at half a guinea, but that sum was too great for nearly all working men. It was reduced, and we found that, although the total number of students fell off after the first session, we had amongst those who came many working men. As a matter of fact, the lecturers practically gave their services. For example, the master of a county grammar school, a Cambridge man, a high wrangler, travelled twenty miles each way to his two classes every week, gave forty lectures in the session and corrected his exercises, and received in all £11 17s. 6d., out of which he had to pay his railway fare and night's accommodation. The wonder was that any movement which could only boast such slender resources should have any vitality at all.

The paper concluded with urging the old universities to be truly the heads and directors of our national education, and with the wish that the writer might be "spared to see the day when the best teaching in England is open and at the door of every English man and English woman who cares to have it."

As there was a desire expressed that the matter should receive further consideration than the time at the disposal of the Association allowed for it, the paper was read again in January 1871, at a special meeting held by the Society of Arts in London.

But the discussions which followed the paper were, in both cases, barren, and those who were looking for help and counsel got little of either. And yet men who were true educationists approved of what was being done and gave the work much valuable encouragement; prominent amongst them was the well-known Professor of Economic Science in the University of Edinburgh, Dr. W. B. Hodgson. And the task of keeping the work alive was a hard one, for the men who lectured had to lead double lives, working at their professions in the day and

toiling at their teaching, or the many matters connected therewith, during the night. But that was at hand of which they knew nothing, but which promised them relief, and the promise was kept. Let me now show what it was which was the immediate cause of the University of Durham taking action in the establishment of a Science College at Newcastle.

I have mentioned, in speaking of George Stephenson's experiments with the safety-lamp, and of its exhibition to the Literary and Philosophical Society, that he was accompanied and assisted by his friend Nicholas Wood, the son of a Tyneside farmer, but educated for the profession of a colliery viewer. In that profession he attained absolute pre-eminence, becoming the President of the North of England Institute of Mining Engineers and Chairman of the Mining Association of Great Britain. The Wood Memorial Hall in the Mining Institute's building in Neville Street was erected in his honour, and the statue which it contains carries down to futurity a fair possibility of forming some idea of the personal appearance of this remarkable man. He was an educational enthusiast, and in 1854, within two years of the formation of the Institute, he urged upon its Council the necessity of providing a Mining College for the systematic training of young men for the mining profession. The idea was eagerly seized upon; a report was prepared upon the matter and discussed at a special General Meeting, and was printed for circulation among the members. It recommended the establishment in this city of a College of Mining and Manufacturing Science. This report was also brought by Mr. Wood before the General Committee of the Coal Trade of the kingdom meeting in London, and there the idea of a National College seems to have been broached. Negotiations were entered into with the principal landed proprietors of the district, the royalty owners and coal owners, and

NICHOLAS WOOD, C.E., F.R.S.

were kept up actively through 1855 and 1856. A memorial was presented to Her Majesty's Government upon the subject and another to the Charity Commissioners, who were asked to appropriate a portion of the funds of the Virgin Mary Hospital of Newcastle to the purposes of the proposed Institution. It was then resolved to introduce a Bill into Parliament for the establishment and endowment of the College, and the Bill seems to have been duly drafted. From May 1857 to 1859 no further step seems to have been taken, but the matter was then brought before the authorities of Durham University, and got no further.

In November 1869 the Mining Institute appointed a Committee, the Mayor of Newcastle being a member of it, to confer with the Durham authorities "upon the practicability of extending the usefulness of the University by organising, in connection with this body, a system of scientific education in the North of England for the instruction of young men destined for the mining or manufacturing professions." This time the attempt succeeded. By 1871, largely owing to the enlightened view of the matter taken by Dean Lake,* it had been resolved to establish a College of Physical Science at Newcastle; a temporary home was found in the Mining Institute; this Society lent its Lecture-room and apparatus, and gave students special facilities for study, and merged its own educational work in that of the new Institution, with results that were for many years the reverse of satisfactory. It was not easy for those who were deeply imbued with educational traditions, received in places devoted to education alone, to appreciate the entirely different needs of a great centre of actual life.

* Dean Lake was at this time Warden of the University, and was of the greatest benefit to the movement, which the University itself generously assisted and continues to assist.

The gentlemen who took an active part in the starting of the new college were, for the most part, University men who looked upon evening lectures as amusing or informing, but certainly not as educational. The evening classes for 1871-72 were indeed held at the Literary and Philosophical Society, but as College classes, and this Society gave, and has continued to give, every assistance in its power to the College. Although it was to be a Science College, yet there was from the first the clear understanding that the title should relate only to that which the more wealthy and influential of the founders desired to be the first branch of learning to which the resources placed at its disposal should be applied. The way was to be left open for the introduction of an Arts side when it was thought that the proper time had come.

And so the Literary and Philosophical Society handed over its evening work to the College of Science. It is needless to tell here in any detail how that evening work was treated in a spiritless and sceptical manner, how suitable advertising and publicity generally were held not to be "academic," how it was supposed that the true knowledge of Latin and Greek was the gift of fortune, but that the English language and literature came by nature, and how it languished and gradually died out.

I must not leave this part of my subject without mentioning the fact that, in the Sessions 1882-83, and 1894-95 courses of six lectures each were delivered by Dr. J. T. Merz, which were designed to serve as an introduction to the study of Mental Philosophy. Newcastle may properly be congratulated on the fact that one who is so rarely endowed, at once as a scholar and a teacher, has taken up his home in it.

Let us pass on to the next great educational work to which our Society devoted itself.

The old need of educational lectures delivered in the

evening soon made itself strongly felt, and an Industrial Evening College had been organised on the plan which our Society had already followed, and was about to be started, when communications were entered into with the syndicate of the University of Cambridge which had charge of the University Extension Lectures. Although the early communications were made by a member of this Society, who was advised and assisted by Mr. Albert Grey,* the preliminary steps were taken without the Society or the College being consulted. Indeed, when the Council of the College was asked at a subsequent period to take the matter up it declined to be connected with it, upon the ground that it was a Radical dodge. The first meeting in connection with this new departure was held in the Lecture Room of the Society on September 10th, 1879. It was a small gathering, but a successful effort had been made to ensure that it should be representative. Mr. W. M. Moorsom attended as representing the University Syndicate, and the Co-operative Society, Trade Council, Working Men's Club, and some of the larger Unions had their leaders present. It was resolved to introduce the movement to this district. That winter the first course of lectures was given by Mr. W. M. Moorsom upon "Political Economy," and was greatly appreciated. North and South Shields and Sunderland joined in the undertaking, and very shortly several of the centres of mining industry took the matter up with eagerness. There was no lack of students; indeed I doubt whether in the history of education there has ever been anything to compare with the numbers, especially of working men, who came forward eager to learn. At one time there were more than 1300 students in a colliery district boasting a population of 19,000 men, women, and children. All classes alike were anxious to benefit by the lectures. At

* Now Earl Grey.

the final examination held at the end of the first Session in the four Northern towns I have mentioned, the most successful student was a working man, the second was the daughter of a Northern M.P.

Dean Lake took an active interest in the movement almost from the first, and, through him, the lectures were called "Cambridge and Durham University Extension Lectures," but, after 1882, Durham ceased to assist in them in any way.

It must be clearly understood that there was no playing at education in this University Extension movement. It was genuine, honest, good work as far as it went. It is absurd to suppose that an exhaustive knowledge of any subject can be given in twelve, twenty-four, or indeed any number of lectures. But even more absurd is the position of those who scoff at such a course as useless or even worse than useless. The men whom Cambridge sent down to us were men with strong convictions, filled with that enthusiasm of humanity which is the privilege of a generous early manhood, imbued with a living knowledge of their subject and a burning desire to impart that knowledge to others. They were the missionaries of higher education filled with the proselytising spirit. Each lecturer issued a complete syllabus which gave the chief heads of each lecture. Each lecture was preceded by a class, which had the privilege of heckling the lecturer for an hour, consulting the living book upon points in preceding lectures or met with in that study which should accompany all attendance at lectures, or discussing difficulties propounded by the lecturer himself. The class was followed by an hour's lecture. Questions upon the ground covered were given out, to which answers in writing were to be sent to the lecturer during the week, and he returned them duly corrected, and from them he ascertained how far he was attaining the end aimed at. He advised upon the course

of reading by which the lectures could be most usefully supplemented, and at the end of each course a written examination was held by some examiner specially selected for the purpose.

At the Annual Meeting of this Society held on February 7th, 1882, a paper was read by the Senior Secretary, entitled, "Some account of the lectures hitherto delivered in connection with the Literary and Philosophical Society of Newcastle-upon-Tyne, together with a suggestion for making them more extensively useful in the future." The object of the writer was to point out that the earliest idea of lectures in connection with the Society was an educational one. Miscellaneous lectures gradually crept in, and were for a time successful; but the tide had turned, and it had become difficult to keep up the supply of lecturers of true eminence, and even more difficult to find them an audience. At the same time the University Extension courses, given in the same room by consent of the Society, were crowded. Popular taste had evidently changed. The membership in the Society was decreasing, and was actually smaller than it had been since 1859, and although the money spent upon lectures was not loss, for without lectures the membership would be yet smaller, still so much money could no longer be spent upon them. The proposal now made by the writer of the paper was that there should be educational courses of lectures in the autumn and spring of each year, one of these being scientific and the other literary. These should be provided, and the work should be carried on in thorough harmony with the University Extension Committee. There should be no serious change in the method of conducting them. "The University Extension lectures for Newcastle are now given in the Society's lecture-room; my proposition is that they should become the Society's lectures." This was not to interfere with the engagement of eminent men

when thought desirable or with lectures by members of the Society.

The paper closed with the motion, "That the Committee to be appointed to-night endeavour to arrange for two systematic courses of lectures during the next session, in connection with the University Extension movement," and it was carried *nem con.* The courses were arranged for, and continued to be given with good though varying success up to 1887, when a scheme was brought by the Senior Secretary before the Annual Meeting for an extension of this kind of work.

It was proposed that the Society should take into its counsel in this matter the College of Science, now anxious to participate in the benefits of the work which it had once rejected. Newcastle would then be affiliated as a University Extension Centre to the University of Cambridge; two courses in science and two in arts would be given in each session; students, who passed successfully two courses in arts or science and six courses in the other class obtained the title of Associate direct from Cambridge, and were entitled to certain privileges if they afterwards proceeded to the University. The scheme was adopted, and Newcastle was the first place in the United Kingdom to be affiliated to the old University of Cambridge.

In the Session 1888-89 miscellaneous lectures were given up, and were not resumed until 1892. In Epiphany Term, 1893, the second affiliation period of three years came to an end, and it was resolved not to continue the system, but to return to the two educational courses and to miscellaneous lectures. The fact is that, although Cambridge had greatly modified its requirements, they still remained too great for most of those who had to do all their work in the evenings of working days.

It is interesting to note one or two facts about the pecuniary results of the different classes of lectures. When the University

Extension lectures were introduced the average attendance at them was 190, and the average cost to the Society was less than £1 a lecture, but in the miscellaneous course, at the same time, the average attendance was only 175, whilst the cost to the Society was £8 4s. a lecture.

Since the Society undertook the charge of the University Extension lectures up to Easter, 1896, there have been altogether 39 courses of lectures, and they (the courses) have been attended by 7668 students, of whom 1023 have sat for the final examination. There has been a total attendance at University Extension lectures of more than 90,000 persons. When the reader casts his eye over the following list of the courses given and the lecturers who gave them, he will scarcely doubt that in this matter also the Society has been invaluable to higher education in our city, and has deserved well of the community.

COURSES OF TWELVE LECTURES EACH GIVEN IN CONNECTION WITH THE LITERARY AND PHILOSOPHICAL SOCIETY BY CAMBRIDGE UNIVERSITY EXTENSION LECTURERS.

YEAR.	SUBJECT.	LECTURER.
1882.	Electricity and Magnetism .	DR. C. M. THOMPSON.
1883.	Development of English Literature since 1789 . . .	MR. RICHARD HODGSON.
	Animal and Plant Life . .	MR. E. A. PARKYN.
1884.	Elizabethan Literature . .	MR. W. R. SORLEY.
	Plant Life	MR. E. A. PARKYN.
1885.	England from 1760 to 1848, the State in relation to Industry and Commerce . . .	MR. A. H. THOMPSON.

1885.	The French Revolution from 1789 to 1795 . . .	Mr. Arthur J. Grant.
1886.	The Nervous System and the Senses	Mr. E. A. Parkyn.
	Four Thinkers of Life: Goethe, Shakespere, Rousseau, and Wordsworth . . .	Mr. R. G. Moulton. Mr. G. C. Moore-Smith.
1887.	Ancient Tragedies for English Audiences	Mr. R. G. Moulton.
	The Forces of Nature . .	Mr. Arthur Berry.
1888.	Heat and Light	Principal Garnett.
	Ancient Comedies for English Audiences	Mr. R. G. Moulton.
	The Principles of Chemistry .	Mr. C. W. Kimmins.
	Elizabethan Literature . .	Mr. R. G. Moulton.
1889.	Electricity and Magnetism .	Professor Stroud.
	Milton and his Times . .	Mr. G. L. Dickinson.
	Earth, Air, and Water: Studies in Physical Geography . .	Mr. W. W. Watts.
	Poetry and Teaching of Robert Browning	Mr. Owen Seaman.
1890.	Earth History from the Rocks .	Mr. W. W. Watts.
	Milton's "Paradise Lost" . .	Mr. R. G. Moulton.
	Plant Life, with special reference to Vegetal Biology . .	Mr. M. C. Potter.
	History of France and the Netherlands during the Age of the Reformation . . .	Mr. Arthur J. Grant.

1891.	The Classification of Plants .	Mr. M. C. Potter.
	The Making of Modern Europe .	Mr. W. F. Moulton.
	Human Physiology . . .	Mr. E. A. Parkyn.
	The Absolute Monarchy in France	Mr. A. J. Grant.
1892.	Human Physiology . . .	Mr. E. A. Parkyn.
	The French Revolution . .	Mr. A. J. Grant.
	Animal Life	Mr. C. Warburton.
	Napoleon and his Times . .	Mr. J. H. Rose.
1893.	Darwinism	Mr. Hugh de Haviland.
	The Victorian Half-Century .	Mr. C. S. Terry.
1894.	The Expansion of England .	Mr. C. S. Terry.
	Elementary Political Economy, or the Making and Sharing of Wealth	Mr. H. S. Mundahl.
1895.	The History of English Gothic Architecture	Mr. D. H. S. Cranage.
	Modern Novelists . . .	Mr. E. J. Mathew.
1896.	English Essayists . . .	Mr. E. J. Mathew.
	The Venetian Republic . .	Mr. H. J. Boyd Carpenter.

During the time when our Lecture-room was being restored after the great calamity which befell our building on the night of our Centenary celebration, the lectures were held in the College of Science. We have now two educational courses given each year, and we have also a long and important course of miscellaneous lectures which are very fairly attended. The old Society is still carrying on the great and noble educational work which it began more than a century ago.

CHAPTER XII.

THE MOTHER OF MANY SOCIETIES.

WHEN our Society started on its long and brilliant career it was without any rival in the North-eastern land. Standing quite alone in this city, it fulfilled in itself the objects which, at this day, are the *raison d'être* of a multitude of different societies which have taken to themselves and specialised some one branch of our Society's wide-stretching and far-reaching original work. To the large majority of these it has stood in *loco parentis*, and to all alike it has given its welcome, and has aided them freely and willingly. It is not possible to give anything like an exhaustive account of how the Society's rooms have, from the first, been lent to all manner of bodies for all manner of purposes, and that without fee or reward, the introduction of religion and the politics of the day being alone forbidden. In this chapter I shall endeavour to give some idea of the part which our Society has played as the mother and helper of kindred Societies.

I need not say anything further than I have already done in a prior chapter about the way in which, for many years, it performed several of the duties which have since appropriately devolved upon the Mining Institute. This was, in fact, one of the earliest tasks which it undertook, but the very first loan of the Society's room seems to have been in April 1796, when

certain of the members were granted its use for special conversation once a month and on days when it was not otherwise required. This was the origin of the formation of those branch Societies within the fold of the parent Society which are now so familiar to us.

In June 1798 permission was given to the Musical Society to use the room once a fortnight for a private concert, and we may look upon this as the beginning of that free lending of meeting accommodation which has become a useful and generous practice. As I proceed it will become plain to the reader that a similar privilege has invariably been accorded to the Societies and individuals who have applied for it and merited it, and that the laudable objects which have thus been assisted have been infinite in variety and character.

I may mention at the outset that, on the 16th May, 1820, a meeting was held in our Society's rooms, with the Mayor in the chair, and there "The Newcastle-upon-Tyne Society for the gradual abolition of Slavery in the British Dominions" was formed. This Society in due course became our Anti-Slavery Society, and in 1848 our Society became, through it, the possessor of a collection of tracts on Slavery and its extinction in the British dominions which form almost a complete history of the great movement.

To those of us who were privileged to work in the Anti-Slavery cause in times of much darkness and discouragement, and who have had to explain to our own children what slavery, even in the United States of America, meant, there is a proud satisfaction in the fact that our Society was an early helper in the mightiest reform which history records.

The first Society which sprang from the parent tree was the Natural History Society of Northumberland and Durham. It was not indeed the earliest to become an independent body,

but it took possession of the collection of curiosities which the parent Society began to form almost as soon as it began to exist. In the third chapter, p. 55, I set out some of the presents which had been received in the first twelve months of its life as given in the first Annual Report, but I fear that I omitted to state the fact that the articles from the South Sea Islands were "rendered extremely valuable from the circumstance that they were actually brought to this country by the celebrated Captain Cook." Every year saw new and valuable additions to the general collection. Amongst the numerous gifts of 1794-95 we find a reflecting telescope, a miner's compass, two inscribed stones from the Roman Wall near Walbottle; a collection of stones, probably coralline, found upon the banks of the Tyne, and polished to show their internal structure; and several collections of shells. The coralline stones were presented by Mr. John Hancock, a saddler and hardwareman on the Sandhill, who was an enthusiastic naturalist, and was father to two men, Albany Hancock and John Hancock, of whom I shall have to speak more fully hereafter, and who stand in the foremost rank of those citizens who, by their original accomplishments, have made our good old city "dear for her reputation through the world."

As the possessions of the Society increased so did the necessity of making due provision for them. You have got but a little way on when you have bought your horse, and no further if he should have been given you. In September 1795 it was resolved to appropriate a sum of £5 5s. annually to defray the expense of "establishing a Repository for subjects of Natural History." Many birds were presented at this time, but money to provide sufficient cases for them was not forthcoming. The Committee express their regret at this difficulty, saying that it "is the more to be regretted on account of the ease with which

a collection in this branch of Natural History might at present be made from the specimens which are so frequently sent to Messrs. Beilby and Bewicke for their intended work on British Birds, the figures drawn from nature."*

Ralph Beilby, the engraver to whom Thomas Bewick was apprenticed, was one of those men who excel in nearly everything which they put their hands to. He taught his pupil everything but drawing and engraving on wood. In those accomplishments Thomas Bewick received encouragement, if not instruction, from Dr. Charles Hutton, of whom I speak at p. 100. He cut his first wood-block, an outline sketch of the spire of St. Nicholas' Church, for Hutton's *Treatise on Mensuration*, whilst he was still an apprentice, his master contributing a steel engraving to the same work. Beilby and Bewick afterwards became partners, and they remained together in that intimate association for twenty years, during which Bewick produced his famous *History of Quadrupeds* and *History of British Birds*, Beilby contributing the letterpress to each. At that day, as the Report shows, these works were thought to be as much Ralph Beilby's as Thomas Bewick's, but time in its long run puts reputations into their proper place.

There is a certain interest in noting that in February 1796 a proposal was made that the Society should purchase a complete mineralogical collection then on sale at Dresden, but it was withdrawn chiefly owing to the "circumstance that collections of this nature (were) liable to a very heavy duty on importation."

* In the noble Museum of the Natural History Society, at the Barras Bridge in this city, there is a case of the birds above mentioned as they were when Bewick's pencil made them live. The collection of original drawings and woodcuts by our greatest artist in the Museum Gallery is also of the deepest interest. No one can form an idea of what Bewick really was who has not carefully studied them.

The only gifts which the Society seems to have received in 1798-99 seem, curiously enough, to have been of coins, gold, silver, and copper. Five donors presented no fewer than 234 of these. Where are those coins now, and where are the 420 more received in the following year? The minerals had accumulated to such an extent that a special committee was appointed to arrange them. But the most interesting entry about this time is the following:—

"December 10 (1799). Drawings and descriptions of two hitherto nondescript animals, lately found in New South Wales, were laid before the Society by John Hunter, Esq., Governor of that Colony; and the proprietors of the General History of Quadrupeds, with Mr. Bewick's figures, were permitted to insert them in their new edition (now just published). The animals themselves, preserved in spirits, have since been received from Governor Hunter."

New South Wales was formally taken possession of by Captain Cook in the name of King George III. on the 20th April, 1770, he landing for that purpose at Botany Bay, and to Botany Bay the earliest convoy was despatched from England on the 13th May, 1787. It took eight months to reach its destination, but it was thought more prudent to land its passengers, 757 convicts, of whom 200 were women, a few miles further north, at Port Jackson. The early years of the colony, which was then a mere penal settlement, were not satisfactory. The convicts were a lawless crew who were kept under military rule. There were frequent quarrels with the natives. The fact that there were three Governors in less than eight years is not without special significance. Governor Hunter entered on his five years' rule in 1795, and, under his firm and capable sway, things soon began to assume a better shape. The colony is, indeed, under a great debt of gratitude to him. At the time

THOMAS BEWICK.

of his appointment he was an Honorary Member of this Society.

These "nondescript animals" are treated of at considerable length as addenda to Bewick's *Quadrupeds*, and figures of them are duly given. The one is named "The Wombach," and the other is said to be "an animal *sui generis;* it appears to possess a three-fold nature, that of a fish, a bird, and a quadruped, and is related to nothing which we have hitherto seen." The account which accompanied them from Mr. Hunter is given *verbatim*, and it tells how the creatures have been preserved in spirits "for the inspection of the learned members of the Literary and Philosophical Society, Newcastle-upon-Tyne." The unnamed animal is the Platypus-Ornithorhyncus or Duck-billed Platypus, and the other is the more familiar Wombat.

By this time the Society's collections had acquired much notoriety, and they formed a subject of frequent discussion in many of the learned publications of the day. The methodical arrangement of the mineralogical department had been carefully completed, and room had been provided "for a complete Herbarium of British Plants, which Messrs. Winch, Thornhill, and Waugh have, with great liberality, engaged to prepare for the Society. They have already presented it with above 700 specimens of dried indigenous plants, arranged according to Dr. Smith's Flora Britannica: and they have lately published, under the title of the Botanist's Guide through the Counties of Northumberland and Durham, a List of the Habitats of the several plants; which, while it will serve as an Index to the Society's Hortus Siccus, will also, it is presumed, be found a useful assistant to future Botanists in their excursions in search of curious plants." This branch of the Society's collections was greatly enriched in 1811 by a valuable present of a large number of plants from New South Wales. In 1808 the

minerals were more completely and effectually rearranged, and a catalogue of them was printed in 1811.

Two years later the Society of Antiquaries was formed "for the special purpose of investigating the antiquities of a district so intimately connected with the events of the last seventeen hundred years." The twentieth report, in mentioning the fact, observes that, in the plan of the Society, this had been stated as one of the subjects likely to engage its attention, but that it had not proved to be so in any considerable degree. So far from there being any "tincture of jealousy" felt at this breaking off from the parent stem, the operations of the new Society were facilitated by the old one in every possible way. Both had the same President, and accommodation was willingly afforded to the off-shoot in the rooms of the parent institution "until the more appropriate apartments in the Castle, for which they are understood to be in treaty with the Corporation, shall be ready to receive them."

The Society of Antiquaries remained as guests of this Society through its changes of habitation for many years. When the present building was erected their treasures were housed in the rooms on the ground floor, beneath those which were appropriated to the Natural History Museum, and there they remained until, in the year 1855, the Antiquarian Society at length obtained possession of the Castle. It may well be that the sculptured stones and the coins which, in its early days, had been presented to this Society, disappeared about the same time.

To return to the days of which we were speaking when we turned aside to notice the formation of the first provincial archæological Society: the old Society's collections continued to be constantly increased. In 1820 "a handsome present of a collection of insects made at Demerara" is acknowledged, and

it is also stated that "these have been arranged and named by G. T. Fox, Esq., of Westoe, who has also added useful references to entomological works." The Society was peculiarly happy in having many absent friends who thought of it with affection when in far-distant lands, and not less happy in including amongst its members, from time to time as occasion required, distinguished naturalists who were able and willing to take charge of its numerous, various, and valuable gifts, and to make the most of them.

In the letter which was widely circulated when the new building had been resolved upon, and pecuniary help was required, it is stated that the house about to be erected is to be suited "to the creditable accommodation of the Books, Philosophical Apparatus, Antiquities, and Subjects of Natural History, which (the Society) has now been engaged for nearly thirty years, in accumulating for the public benefit; and of the collections which will probably be made by it in future years, and also by the Antiquarian Society of Newcastle, more recently established, with the same public-spirited views."

Perhaps the most immediately popular present which the Society ever received was in September 1821, when it became the happy owner of a real mummy—that very mummy in the contemplation of which so many of us, as small children, have "snatched a fearful joy." We were always told with charming vagueness that this withered, weird, brown specimen of humanity was none other than Pharaoh's daughter, and for us then, and perhaps even now, there was but one Pharaoh and one daughter. Those were the very arms which lifted little Moses out of the ark of bulrushes. How he must have cried from terror, and how frightened his poor mother must have been, if indeed the Hebrew women were not dried up like those of Egypt! Had this gaunt scarecrow ever been extolled as a beautiful and

benevolent Princess? Much might be expected from people who worshipped crocodiles and beetles, but this was too much. And yet it taught us something, and some of us were told—

> "Now, get you to my lady's chamber, and tell her, let her paint an inch thick, to this favour she must come."

We did not laugh at that.

The great event of the arrival of this mummy made much stir in our canny town. I extract the following account from the twenty-ninth year's report:—

"The Committee also received during this month from Thomas Coats, Esq., of Haydon Bridge, the munificent present of a mummy, in high preservation and of great beauty, purchased by himself at Gournou, the celebrated burial-place of the ancient Thebes, the capital of Upper Egypt. And to gratify the public curiosity with regard to this curious relic of antiquity, the Secretaries engaged to attend for a fortnight two hours each day, that the members and their friends might be accommodated with its inspection, without the risk of its receiving any damage. The multitudes who sought admission during this period having exceeded all expectation, so as to render it impossible for many who wished to see it to contemplate it at their leisure, the Secretaries have ever since been ready, on the shortest notice, to accompany private parties to inspect an object which, it will be admitted, could not, without extreme hazard of its suffering irreparable injury, have been left open for indiscriminate inspection; and which the Librarian could not, without the neglect of his indispensable duties, have left the Library to shew in a separate apartment to all who might apply on the spur of the moment. The Committee have been engaged in an extensive correspondence on the subject of the Mummy: and they have accepted the obliging offer of Mr. Ramsay to make an accurate

drawing of its beautiful external case, which drawing he has executed in a manner highly creditable to himself and satisfactory to the Committee."

The mummy was placed in a glass case, and it continued to attract much attention. Such things were not so common when our fathers were young as they are in this time of universal travel and encyclopædic information when our children approach middle age. But the mummy Ram which joined the mummy Princess in 1823, and has, I think, disappeared, did not draw at all in the same way. The surprise was over. A thing which has once been done, with whatever difficulty, is easily repeated. Granted that the human form divine can be preserved for ages, even with the loss of its divinity, there is little difficulty in assuming that any other form may, although the anxious inquirer might find it hard to understand why any person should wish to preserve the mundane form of an old tup.

Now, just at the date of our Society's receiving the first mummy, much attention was being paid to the deciphering of hieroglyphics. The famous Rosetta stone had been discovered at Reshid or Rosetta, in the Nile delta, in the year 1799, and, with it, the clue to the mysterious hieroglyphics. Surely that stone with its thrice repeated inscription is one of the most fascinating objects in our national museum. By the aid of the Greek the decipherment of the picture-language was attempted, but it was not until 1818, and after the discovery of a further inscription on the plinth of an obelisk in which the name of Cleopatra was given in hieroglyphic writing and in Greek, that Dr. Young made out the names of Ptolemy and Berenice, at the same time discovering the true principle to be pursued in all such investigations. In 1822 François Champollion read the whole of the inscription which still remains, and he continued to work patiently and scientifically at similar tasks until his

death in 1832. He must be called the discoverer of this new intellectual realm, and he left not only a dictionary, but also a grammar of the long-forgotten written language of Egypt of the Pharaohs. Well might his distinguished countryman, Chateaubriand, say of him, "ses admirables travaux auront la durée des monuments qu'il nous a fait connaître."

In 1823 an exact copy of the inscription on the mummy was forwarded to M. Champollion, and on October 31st he wrote a full and long explanation of each of the signs used, and concluded by saying, "The entire legend answers pretty nearly to the following phrases:—

"May she be approved by Phre, the Lord of the Celestial Gods, and by T——M. (Egyptian Mars), Lord of the Worlds May Osiris, the Supreme Ruler of Amenti (Hades), grant repose to the Osirian Lady, her daughter Tashorpe ** daughter of ** (mother) deceased."

It is not much, but enough. This grubbing up of coffins and withered carcases to gratify the curiosity of peoples who are quite content to become, in their turn, manure for the common Mother Earth from which they were taken, is something of a ghoulish proceeding after all. The only other thing to be said about this mummy or its case is that some skilful and triumphant collector succeeded in surreptitiously carrying off the foot-board of the coffin which held upon it part of the inscription.

In this year, 1823, the Society purchased the celebrated Wycliffe Museum, a Natural History collection in an excellent state of preservation, and which had been long known to naturalists throughout Europe by the numerous references made to it in the works of such eminent ornithologists as Pennant and Latham. A notice in the *Newcastle Courant* of the 17th November, 1827, says that when formed it was probably

the foremost collection of its kind out of London, and adds: "But what is of far greater moment, it was the actual cabinet from which our illustrious townsman, Bewick, drew on the spot the greater number of these superlatively beautiful figures which illustrate and embellish his unique *History of British Birds*."

The purchase-money of nearly £500 was advanced at interest by Mr. G. T. Fox, and he also examined the collection for the Society, and took the chief part of the labour throughout the entire transaction.

Amongst other important gifts which the Society received about this time was a valuable collection of some two thousand insects, collected and beautifully preserved by the Rev. Dr. Macculloch, Principal of Picton College, Nova Scotia. These were the more welcome as most of the other insects in the Society's possession had been collected in hot climates.

But, what with handsome gifts and extensive purchases, fears began to be entertained that the extensive accommodation provided for the Natural History Museum in the Society's building would prove inadequate to its purpose. At the very first meeting held in the new Lecture-room gifts were announced of a large collection of birds from St. Petersburg, smaller collections of birds from many local gentlemen, 1500 British geological speciments, and 572 dried English plants duly classified. It was resolved to keep the Museum open daily between the hours of twelve and three, and that such members as chose to subscribe half-a-guinea annually should, in addition to the free admission which was enjoyed by all members alike, have tickets allowing the entrance of two persons daily. The general public were admitted upon payment of one shilling each. Thirty-three half-guineas were at once forthcoming, but the plan was hotly contested, and, although carried, did much

to bring about the feeling which ultimately caused a separate Society to be started.

The Museum was not opened until December 1825, when the local press gave it much attention, and discussed its objects of interest in an earnest and amusing way, but they are evidently at times speaking chiefly of the Wycliffe purchase. Thus they say that there are "27 Mammalia and 751 Birds of which about 30 are presents and purchases since the Museum came into the Society's possession." This particular department of the Society was now managed by a special Museum Committee, which worked with a will, and issued a list of the comparatively few British birds which were required to complete the collection, and they received quite a remarkable number of presents for the Society. Amongst these was another mummy, which was given by Mr. J. B. Wright, of Cambridge; it was accompanied by a mummy of the sacred Ibis in a glass case, but familiarity had bred contempt, and these arrivals seem to have made no special sensation.

M. Champollion again was applied to, and he translated or interpreted the hieroglyphics upon the newly acquired mummy's case, but the subject-matter was of no special interest, and was not published until 1830. In March of that year, however, Mr. T. M. Greenhow and Mr. Baird made (in the Lecture-room) an exhaustive examination of the new mummy before a number of the members, occupying two evenings in the investigation. The results obtained were published in detail and were considered to be of much value, as they proved how completely the Egyptians had, some thousands of years ago, succeeded in preserving the human frame from corruption, and how very unsatisfactory such preservation is after all the trouble has been taken.

In 1827 the Museum Committee issued an exceedingly

interesting report, which not only tells of 126 distinct presents of natural history objects of many different kinds, during the year, and consisting of considerably over 2000 specimens, but mentions many other points which show how important the collections which the Museum contained had become. Its geological department had won the admiration and praise of the leading geologists of the day, and contained a well-assorted array of more than 3000 objects. In Insects it was especially rich, those of the British Isles and nearly a thousand foreign species having been arranged in genera. The list of British shells, many of which were purchased from Dr. Turton by private subscription, was nearly complete, and only eighty-nine species were wanting to perfect the collection of British birds, forty-five of these being presented in the following year.

The Committee go on to mention that the sum of sixty pounds a year had been set aside to defray the Curator's salary and the other incidental expenses of the Museum, but that this was not sufficient to permit of many desirable objects being purchased, and thus special efforts were required to obtain special subscriptions for this purpose. The local press took the matter up, and, whilst complaining somewhat of the "attic" allotted to the Museum (the present Committee Room), it spoke with pride and delight of the numbers who climbed up to it, of the courtesy of Mr. John Thornhill, at once Librarian and Curator, and of the curiosity and interest of the contributions which were constantly flowing in. Some of these, such as an ancient banner supposed to have belonged to the Incas of Peru, were only found a place by a wide and liberal interpretation of the phrase "natural history."

But it had long been evident that there was considerable friction between the members of this Society who cared most for the Library and those members who cared most for the

Museum. In 1828 a resolution was come to that "all works on Natural History (except periodicals already subscribed for) be purchased in future out of the funds of the Museum," but the Committee explained that, whilst the public interest in this department was greatly increasing,—the gifts in a single year being of the value of £120, and 2820 persons not members of the Society obtaining free admission,—most of the great cost incurred in providing for and increasing the different collections had been defrayed from private sources or without entailing any burden upon the funds of the Society. They evidently anticipated a stormy meeting in 1829, for they expressed their earnest hope that the discussion would be "conducted with moderation and good temper; and that whatever might be finally determined upon would be for the ultimate advantage of Science, and of this Literary and Scientific Institution."

The resolution of the preceding Anniversary Meeting was rescinded, but the further propositions were not accepted. They were:—

(*a*) That the Committee should have power to sell the Museum.
(*b*) That a Committee should be appointed to consider the best means of forming the Museum into an establishment distinct from the Society, and to report to an early Monthly Meeting which should have power of rejection or adoption.
(*c*) That, if the Museum were disposed of, all presents should be returned to their respective donors.

The idea which found most favour was that a new Society should be formed, and that it should buy ground from this Society upon which a special building adapted to its purpose should be built, and that the new Society should also purchase the collections which belonged to this Society.

Prior to the Annual Meeting there had been a gathering of

"Friends to the Formation of a Natural History Society" held in this Society's rooms on the 25th February, 1829, with the Rev. John Collinson in the chair. It was resolved that a paper which was presented to this meeting should be printed and circulated amongst the members of this Society before the Annual Meeting, which was to be held on the 3rd March. This paper set forth many reasons why it was desirable to separate the Natural History department from the Society, but perhaps the most convincing of these was that which came last. Let me give it in the words of the paper itself. It says:—

"But there is yet another and stronger reason why the Museum should be separated from the Society, and which completely precludes the hope of their succeeding together, even at a distant period, and that is the growing dislike of many of the Members towards the Museum: from the first it has been the cause of discord in the Society, but of late it has shewn itself most unequivocally; so that the separation becomes advisable as a means of restoring that harmony to the Society which is so necessary to its prosperity. The direct effect of the separation upon the funds of the Literary Society will be most beneficial. Besides relieving it of £500 of debt it will set at liberty nearly £100 per annum to be applied to the reduction of the floating debt of the Society, which, in addition to the sum already appropriated, in 10 years would reduce that debt as far as may perhaps be thought advisable; the sum remaining being no more than an equitable rent-charge on the property, which a future race of Members may remove if they wish it. The advantage of the separation will thus be two-fold, whilst, in connexion, for many years to come (supposing even that that connexion could be kept up) the one Institution would be an obstacle to the other."

Then came the Anniversary Meeting of the 3rd March which I have already mentioned, and, to quote *The Northern*

John Bull of the 1st April, "Many smart speeches were made for and against disposing of the Museum, but 'the noes had it.'"

But the matter could not end there: the difficulties were really serious, and there could be no happy union between parties who differed so widely. In July 1829 a circular was issued which set forth that "The Undersigned (being aware that in this Part of England there are many Persons either scientifically or economically interested in the Pursuit of Natural History, and that it would tend much to the Advancement of that Study were these Persons united in a Society professedly for that Object, and in Aid of the Museum at present attached to the Literary and Philosophical Society of Newcastle-upon-Tyne) would propose that a Society be formed, to be called "The Natural History Society of the Counties of Northumberland, Durham, and Newcastle-upon-Tyne."

Gentlemen who wished to become members were to signify their intention by letter, addressed to Mr. Thornhill, Curator to the Museum, and a meeting was to be held at the Literary and Philosophical Society on the 19th of August to adopt rules for the new Society, and to launch it on its way.

Looking back over the many years which have intervened between that time and to-day, and remembering the varying fortunes of the parent Society and this her most promising child, the names of the persons who signed this circular have a peculiar interest. Dixon Dixon, John Trevelyan, W. C. Trevelyan, James Losh, John Collinson, William Turner, John Adamson, Chris. Cookson, Emerson Charnley, Thomas Crawhall, J. Alder, G. T. Fox, George Wailes, R. B. Bowman, Robert Stephenson, William Hutton, Thomas Baker (Whitburn), John Thornhill, Cooper Abbs, Joseph Watson, Albany Hancock, Nich. Wood, William Hewitson, George Gibsone: how many of these men served this Society for long years in different

capacities, how many have left names which hold a high place in the annals of English science? Surely the Natural History Society which could boast such men amongst those who formed it began its work under peculiarly favourable auspices.

Another valuable and interesting feature of this list of signatories is that the staunchest friends and supporters of the parent Society are fully represented amongst them. Whatever troubles there may have been, how strong soever the opposition of any portion of the members, there was no doubt, jealousy, or misgiving amongst those to whom the fortunes of this Society had been entrusted from the first, and were to be entrusted for many years to come. In the report presented to the Annual Meeting on March 2nd, 1830, the Committee of this Society speak with pleasure of the formation of the Natural History Society, and say, "Its most active promoters . . . have ever been, and still are, amongst the most zealous and ardent friends to this, which they are proud to call the Parent Society; and although, since the members of the new Society, though all friendly to, are not all members of this, the subjects in the various departments of Natural History which shall be collected and preserved by its funds, though proposed to be associated and arranged with those in our Museum, are naturally to be considered as its property, yet your Committee trust that there is no wish on either part to separate them; and they hope that no untoward circumstance will ever occur which may by possibility lead to misunderstanding."

The meetings of the new Society were to be held in our Lecture-room. At the first of these "the Rev. William Turner read a preliminary Essay, detailing the motives which led to the formation, and the benefits which were contemplated might be drawn from the operations of such a society in this neighbourhood." The address was concluded amid great

applause; and, on the motion of the Rev. J. Collinson, the thanks of the meeting were voted to the Rev. William Turner, with a request that he would allow it to be printed and circulated, not only on account of its general ability, but also for the comprehensive elucidation of the object and utility of the society, which, the meeting was convinced, needed only to be known to secure public countenance and support." At the next meeting Mr. Turner was in the chair, and this shows that the new Society "had been got up in a spirit of friendly co-operation rather than of hostility to the Literary and Philosophical Society."

And, for a time, the two Societies went on peaceably side by side, and presents were received by each and put away together, but it was clear from the first that such a state of affairs could not continue for very long. Although great care was taken to avoid any occasion of offence, there was necessarily some friction from time to time, as there must always be under a twin management, and there was abundant room for latent jealousies to develop themselves. The meetings of the new Society received many communications which the old Society had failed to get, and the gentlemen connected with the coal trade furnished several of these. True that an arrangement had been made by which, after papers had been read at the meetings of the Natural History Society they were to be available for those of the Literary and Philosophical Society, but this concession meant but little and was of a somewhat doubtful character. There was, indeed, some hope in 1831 that the Society might, "in no long time, find itself in a situation to combine its funds with those of the Antiquarian and Natural History Societies, for the accommodation, under one roof, of our various collections, and thus of consolidating and firmly establishing the relations which do naturally, and ought perpetually, to subsist

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among them." But this hope was destined to remain unfulfilled, and, at the Annual Meeting in 1834, the new arrangement which had been come to was brought forward and sanctioned.

The Committee state that arrangement in the following words :—

"The most prominent feature in the transactions of the year which is now closed has been the negociation which the Committee have concluded with the Natural History Society for the purchase of the ground on which they have erected their extensive building for the accommodation of the Antiquarian Society, in the Arcade, etc., on the ground floor, and for the reception and convenient display of the numerous and valuable articles in the Museum ; a considerable part of which is still to continue the property of this Society. By the purchase money (£400), in addition to the £200 annually set apart for that purpose, your Committee have been enabled to pay off £600 of the 5 per cent. Loan, and in that proportion to reduce this burden upon the Society's annual income. When the Museum is finished, and united by a convenient passage with the Library-room, a further inducement will, no doubt, be held forth to persons becoming Members of this Society; to whom, and to the friends whom they may introduce, your Committee have secured the privilege of freely inspecting the articles in the Museum; more especially as a considerable extension is proposed of the time during which the rooms are to be kept open. And, notwithstanding these additional advantages, they are attained at a reduction of at least £20 from the annual expenditure of this Society for the maintenance of its own comparatively limited Museum: besides having the opportunity of appropriating the room, which at present contains it, to any other purpose which may be thought most eligible."

The exact terms of the arrangement which is talked about

in this Report were that the Museum of this Society should be placed in the new building of the Natural History Society, to whose care and management it should be entrusted, the articles being carefully marked. The members of the Literary and Philosophical Society and their friends were to have free access whenever the Museum was open. The members of the Natural History Society were allowed, for immediate reference, to take books relating to objects of Natural History from the Library to the Museum, such books being received from and returned to the Librarian. The Literary and Philosophical Society were to pay £40 per annum to the funds of the Natural History Society.

This was surely a most liberal arrangement upon the part of the parent Society. It received £400 as the purchase-money of its land, but paid the purchaser ten per cent. per annum upon that sum, whilst, at the same time, it contributed much the greater part of the show.

This arrangement continued without variation until, in the year 1884, the growing requirements of the North Eastern Railway Company compelled them to absorb the whole of the Natural History Society's building and the collections were removed to the fine new Museum which had been erected in memory of the Hancock Brothers, at the Barras Bridge.* The careful marking of the specimens belonging to this Society had long been abandoned—there was no available record of them; and the members, with that conspicuous generosity which has ever marked their dealings with other bodies, consented to receive the nominal acknowledgment of £100 in full payment for the whole.

Surely few towns ever boasted of two such brothers as Albany

* It is surprising that many citizens of Newcastle should still be unaware of the noble collections of nature and art contained in this Museum. Any city on earth might well be proud of it, but it is, for the most part, neglected by the general public. And yet Thomas Bewick and John Hancock have given to it of their best, and, in their respective lines, there is none better.

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and John Hancock. We were rich in naturalists—Joshua Alder, Selby, Fox, the Bradys, Dr. Embleton, Hewitson, Cooper Abbs, Atthey, and many another, but the Hancock brothers stood alone. Gentle, simple, unassuming men, there was a true, natural nobility about them both. Albany was perhaps the man of greatest width—or, perhaps it would be more correct to say that his interests were wider—but each brother was unique. Each had his own special line: Albany Hancock was the highest authority in the world on the British Nudibranchiate Mollusca; John Hancock was an unrivalled ornithologist. Both were artists in the truest sense. Albany Hancock's drawings of the anatomical details of microscopic objects are unrivalled for delicacy and truth. John Hancock, as a taxidermist, stands alone in the wide world. He is first, and there is no second. These are not the extravagant words of one who from his early youth was privileged to see much of them, and who is still enthralled by the memory of their rarely beautiful personalities. They will be re-echoed by all who really know.

Both brothers took an active interest in the affairs of the Society, and were of great service to it for many years as members of Committee. Albany Hancock died in 1873 at the age of sixty-seven, whilst John Hancock lived until 1890, and was eighty-two years old when he died.

The opening of the new Museum in 1835 placed the rooms which had been required for it and for the Antiquarian Society at the disposal of this Society's Committee. The old Museum Room was made into the Committee Room, and was also used as a Reading Room; the room which the Antiquaries had occupied became the home of the Medical Society, and the old Committee Room was let to "the newly-established Law Institute." The Medical Society continued to have possession of their room until 1847, but the Law Institute seems to have

been a passing visitor. It was the precursor of the present Newcastle and Gateshead Law Society.

The next off-shoot from the parent Society was to be one for the promotion of the Fine Arts. At the monthly meeting held in September 1836 papers were read upon this subject by Dr. White and Mr. James T. Bell, and Mr. Sopwith moved, and Mr. Greenhow seconded, "that a committee be appointed to forward such a society, in conjunction with this society, and take the affair into consideration." A committee of thirteen members was accordingly appointed, and it went to work with so much energy that, before the end of the year, Lord Ravensworth had accpted the office of Patron, and the Bishop of Durham that of President, and, in the report presented in 1838, the success of the new Society is announced. Upon its original Rules is printed, "Established October 22, 1836, under the sanction of the Literary and Philosophical Society, Newcastle-upon-Tyne." The Fine Arts Society carried on its useful operations for half a century, at first in the apartments connected with the Central Exchange, and afterwards, when the Society of Antiquaries moved to the Castle, in the rooms below the Natural History Society's Museum which the Antiquarians had occupied. It was fortunate in having for many years as its Head Master a man of great original ability and inspiring genius in Mr. William Bell Scott, and a devoted and able chairman in Mr. Joseph Watson. But its chief and conspicuous success was due to the unwearying and loving labours of the late Mr. James Leathart, who possessed an innate appreciation of good art such as is rarely found, and combined with this a self-sacrificing readiness to spend and be spent in its service which is beyond praise. His own collection of the works of the pre-Raphaelite brethren was widely known, and gave some character to this district.

When the North Eastern Railway drove out the Natural History Society, the Fine Arts Society had also to leave, and it entered into alliance with the College of Science and became the Art Department of that invaluable institution. It is only right that I should record how much that Department owes to the wisdom and liberality of one by whose untimely death the cause of learning in general, and of art in particular, has in this district lost so much, the late Mr. Charles Mitchell.

In each of the meetings of the British Association in this city, in 1838, 1863, and 1889, this Society has taken a prominent part, sending deputations to urge the claims of Newcastle to the honour of a visit, lending its rooms to the Local Committee and for the meetings of Sections, etc., opening its Library to the Members and Associates, and contributing many willing workers to the necessary preparations. The great success of the last gathering was acknowledgedly due in a large measure to the extraordinary and invaluable exertions of Professor Merivale, then the Society's Junior Secretary.

The next off-shoot thrown out by the parent tree may strike those who have not considered the nature of many of the papers contributed to the Monthly Meetings as somewhat remarkable. It was the establishment of a Farmers' Club for Newcastle and its neighbourhood. The preliminary meetings were held in this Society's Committee and Lecture Rooms, and the Club took for its meeting-room the apartment once occupied by the Antiquarian Society. It began at the end of 1845 and remained with this Society for more than twelve years; and in 1846 the use of the Lecture and Committee Rooms was granted to the members of the Royal Agricultural Society of England during their meeting in Newcastle, the members also having permission to make use of the Library.

The Society's willing help was next afforded to a Society of

Teachers formed in this town in 1847, "having for its object the raising the intellectual character of the instructors of youth, and the advancement of general education, on the soundest principles of intellectual philosophy." The Committee "had the greatest satisfaction in placing the lecture room under the controul of the managers for the meetings of the society," and had "the gratification to state that three most important lectures had been delivered before the Teachers' Society, . . . the first, by Dr. Dodd of North Shields, on 'The best means of promoting the Intellectual Improvement of Youth.' The second by the Rev. J. C. Bruce, 'On the best means of promoting the Moral Improvement of Youth'; and the third, by Mr. Snape, 'On Mathematics as a Portion of a Liberal Education'; which lectures have been given to the public by their estimable and talented authors."

A Sanitary Association which was got up principally by the exertions of one of the members, Dr. Robinson, had also the use of the lecture-room for its meetings during the same year. Half a century afterwards another Society with similar objects, the North Eastern Sanitary Inspection Association, has been frequently indebted to this society for similar hospitality.

And here I may explain that I cannot pretend to mention the names even of the innumerable bodies which have made "the Lit. and Phil." their rendezvous from time to time. Some of these, such as the Anti-Slavery Society, and the "Newcastle Society for improving the condition of climbing boys," have long since happily fulfilled their missions, and what their missions were must be carefully explained to the curious of the present generation. My purpose is rather to speak of those which have directly sprung from this Society, or to which this Society has given a home in the impecunious and struggling days of youth.

But I think that I should note that every application for the

use of the Society's rooms has been carefully considered, and has been decided upon its supposed merits, the granting or refusal of the request being by no means a foregone conclusion. Thus a motion made at the annual meeting on February 6th, 1850, "that it be a recommendation to the Committee to allow the use of the Lecture-room for a lecture on the connection between temperance and education, and between intemperance and ignorance," was negatived.

For many years the Law Students' Debating Society had the advantage of the Committee's permission to meet in a room belonging to the Society, and it is interesting to recall that one of the leading spirits of that band of eloquent young men in the fifties was the present Mr. Justice Bruce.

But the most important of all the Societies which have been cradled in this is beyond all doubt the North of England Institute of Mining Engineers, which was founded in 1852. I need not remind the reader of the early work done by this Society in the direction of the systematic advancement of mining science generally, or of the pleading by Mr. W. Thomas for the establishment of such an Institute before last century had run its course. The matter had never lost its interest, and the Committee, rejoicing in 1836 over the branches which had sprung from the old tree, say "it would be unnatural in the Parent not to rejoice in the prosperity and success of her offspring; and, so far from cherishing the slightest envy or jealousy at their individual success, will feel herself entitled to a portion at least of the credit which they shall gain, particularly if the eminent example of Mr. Buddle should occasion the establishment of a General Permanent Record Office for the Mining Transactions of the district, she will recollect that the idea was originally started by a then distinguished Member of her own body (the late W. Thomas, Esq.), as early as the year 1797, at

a time when the public mind was not sufficiently opened to its many advantages."

Mr. Buddle did not live to see his ardent desires carried into effect, but he did much to make a Mining Institute possible. To him perhaps more than to any other man do we owe the paramount position which the science of mining engineering has attained. He died in 1843, but his name will live as one of the great pioneers of our Northern coal industry as we know it, so long as the Coal Trade flourishes "on the banks of Coaly Tyne." He also was one of the invaluable men who were trained under the Rev. William Turner.

Mr. Nicholas Wood, the first President of the new Society, set forth its objects in his inaugural address thus :—

"1st. By the union and concentration of professional experience to endeavour, if possible, to devise measures which may tend to avert or alleviate those dreadful calamities which have so frequently produced such destruction of life and property, and which have always been attended with such misery and distress to the mining population of the district; and, 2nd, to establish a literary association more particularly applicable to those engaged in researches in the theory and practice of mining than any of the institutions at present established in this locality."

The Mining Institute has grown to be an institution of the first importance. The most friendly relations have always existed between it and this Society, and an arrangement exists between the two bodies, whose homes adjoin and are connected by an iron bridge, whereby the members of each Society have access, for the purposes of reference and study, to the works in the Library of the other.

I have now dealt with the formation of the Societies which may properly be considered as having sprung from the Literary

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and Philosophical Society. I may, in conclusion, and in order to give some adequate idea of the wide range of hospitality which the parent has exercised, give simply the names of the different bodies to which the use of the Lecture Room or Committee Room, or both, has been granted free of rent during the past ten years. Many of these, probably the majority, have had the privilege throughout the Winter Session, frequently throughout the year, and the permission has been renewed for many years in succession :—

The Tyneside Students' Association, the Northern Counties Photographic Association, the North-East Coast Engineers' and Shipbuilders' Association, the North of England Microscopical Society, the Foremen Engineers' and Draughtsmens' Association, the North-Eastern Sanitary Association, the Society for National Insurance, the Food Reform Association, the Wesleyan Conference, the North of England Volunteer Service Institution, the Mining Institute, the Newcastle Royal Infirmary, the Institution of Naval Architects, the Shelley Society, the Tyneside Geographical Society, the Provisional British Association Local Committee, the National Society of Musicians, the Vegetarian Society, Northern Architectural Association, Trinity College, Northumberland and District Teachers' Union, Royal Grammar School, Fruit-Growers' Association, Linguistic Association, National Home Reading Union, St. Mark's Ex-Students, Horticultural Mutual Improvement Society, Newcastle Teachers' Association, Newcastle Health Society, National Phonographic Association, Plumbers' Association, Tyneside Naturalists' Field Club, Government School of Art, Royal Archæological Institute of Great Britain and Ireland, the Society of Chemical Industry.

We are entitled to contemplate that long list with some pride. Our Society has been the mother of noble children, and a staunch friend to every endeavour to improve the moral, social, and intellectual condition of mankind.

CHAPTER XIII.

THE CENTENARY AND AFTER.

THE Society attained the good old age of one hundred years upon the 7th February, 1893. Arrangements were made for the due celebration of the important event by holding a great Conversazione in the rooms of the Society and those of the Mining Institute. Never before had there been so brilliant a gathering, never before had the suite of fine rooms been so admirably decorated or looked so beautiful. As you lounged beneath tall and graceful palms or wandered in groves of richly-fruited orange trees, and the sweet strains of music stole through the air, it was difficult to believe that you were in "canny Newcassel." You entered sympathetically into the feelings of the old lady, so fond of fairy stories, of whom Tom Hood tells, when, under slightly other circumstances, she exclaimed—

> "Little Prince Silver-wings has ketched me up,
> And set me down in some one else's garden."

The entertainments provided for the occasion are thus described by one of the journals of the day: "The refreshments purveyed in the new reading room were quite *recherche*, and well served. Mr. J. H. Amers' orchestral band discoursed from the galleries overhead; a double quartet party from York

LORD ARMSTRONG, C.B., F.R.S.

Minster rendered with cultured effect in the Hall many fine songs; and then, in other rooms, something of the inventive genius of the age was demonstrated—in one place, Edison's latest phonograph, and at another quite a large number of telephonic communications with the opera at the Art Gallery, by which a succession of hearers, although a quarter of a mile away, seemed to be too near, so loud and resounding were the choruses and orchestration heard, the flute always coming out most distinctively. While Dr. Spence Watson and Lord Armstrong held together as large and brilliant an audience as probably ever sat for a couple of hours in the theatre of the Lit. and Phil., Mr. Richard Welford took up another company in the new lecture room, and entertained every one fortunate enough to get in with a pictorial address on 'Old Newcastle.' After all these enticing and entertaining things the youthful celebrants finished off with a dance in the Wood Hall, the floor of which had been laid with a drugget, and made it quite enjoyable. Altogether, the celebration was as pleasant as the memories of the good work done by the society."

The Senior Secretary's contribution was an historical sketch of the Society, but that which made the evening specially memorable was the account given by the venerable President, Lord Armstrong, of the result of his original researches into various electrical phenomena which he afterwards published under the title of "Experimental Lecture on novel effects of the Electrical Discharge." The experiments were new, numerous, and splendid. Lord Armstrong became a member of the Society in 1836, his father, Mr. William Armstrong, having joined it in 1799, and having for some years taken an active part in its management.

Before leaving the rooms at eleven o'clock on the night of the centenary celebration the writer walked round the galleries,

gazing on as gay and glittering a scene as any staid and sober old Society could possibly afford. Travelling up to the metropolis during the night, he took up the *Times* whilst breakfasting on the following day, and his eye fell speedily upon a short paragraph which stated, without note or comment, that during the night the Society's building had been burned to the ground.

And it was true. The greater part of the old building had been actually destroyed or rendered useless for its purpose.

A telegraph clerk, going to his work in the neighbouring General Post Office about a quarter to six on the morning of the 8th February, discovered the outbreak of fire and gave the alarm. Assistance was soon forthcoming, and by great and well-directed exertions, the Fire Brigade succeeded in preventing any extension of the conflagration, but heavy damage was done before the flames were extinguished. There was not a part of the building which had not suffered from fire or water, but the chief amount of destruction had been done in the principal library, where the fire began. The floor had partially fallen in, the roof was completely destroyed, the books were burned by fire or drenched with water, and the ceiling of the lecture theatre had fallen in. The destruction was not indeed complete, but the sight was a sorry one, and the rain and snow and tempest seemed, for a moment, to hold the institution at their mercy.

Still this was but for a moment. The Committee rose to the occasion: the Secretaries, Professor Merivale and Mr. Alfred Holmes, who had taken office for the first time, calmly looked the situation in the face, and, with courage and business-like promptitude, began at once the heavy and weary work of reparation. Friends too turned up on all hands, and the aid given by many, but conspicuously by the Mining Institute, was of the greatest advantage. It was found that the fire had

THE RUINS, FEBRUARY 8TH, 1893.

originated in the south-east corner of the old library, and was probably due to the over-heating of a beam beneath the hearth-stone of the fire-place. In 1890 the library was heated by hot water, and since that date the fire-place in question had been unused, but on the afternoon of the 7th February a fire was lighted in it for the purpose of providing hot water for the refreshment department. As was frequently the case at the time the Library was built, one of the main beams lay under each hearth-stone, and this bad practice accounts for a great number of fires in other places as well as for this. Alterations made in the flooring to accommodate the hot-water pipes permitted the access of air to the beam, and to this concurrence of circumstances the great fire in question was probably due.

It is worth noting that when the hearth-stone under the corresponding grate on the other side of the Library was raised, the beam beneath it was found to be much charred, and yet no fire had been lighted in that grate for at least forty years.

When the new wing was built in 1887-88 a large room was provided on the ground-floor, under the extension of the Library, and it had been occasionally used for meetings of societies when the numbers attending were not too large. This room the Committee at once fitted up as a temporary library, whence magazines, new books, and the like, might be issued, and also as a reading-room; and so successful were they in meeting the immediate requirements of the case that, in spite of much inevitable inconvenience, there was no falling off in the number of members.

They then attended to the grave questions of insurance, of the reconstruction of buildings, and the re-purchase of books. They appointed Mr. F. W. Rich, the well-known architect, to meet the representative of the Insurance Company and to endeavour to agree upon the cost of restoring the buildings ;

Mr. Thorne was entrusted with a similar duty with reference to books lost or damaged; and furniture, pictures, busts, etc., were valued by experts, and the amount of injury or loss was adjusted between the Honorary Secretaries of the Society and the Secretary of the Insurance Company. It was found that upwards of 9609 books had been actually destroyed, 7468 had been more or less seriously injured, whilst 21,842 had received damage to binding alone. The total amount ultimately received from the Insurance Company was £10,648 14s. 2d., upon all accounts.

Upon the 31st August, 1893, the Committee met the members at a special General Meeting and reported the settlement which had been come to, and the steps which were being taken to replace such of the books as had been destroyed as were still to be obtained and as it was in any way desirable to replace.

They then entered into a careful and detailed explanation of the manner in which they proposed that the building should be restored. As this work has been successfully carried out it is unnecessary to quote largely from this part of the report, but I may summarise its chief conclusions.

The roof of a library, especially when it is to be lighted by skylights, is always an anxious matter. It is not easy, at the same time, to provide efficiently for the escape of impure air and yet to avoid the entrance of snow and rain. In this case there was the further consideration that the old roof had proved to be a special source of danger in the case of fire. Now it was proposed to make a double roof, an outer one of plain iron-work and rough plate glass, and an inner one of three iron-framed glass domes, the connecting plaster work being attached to iron net-work and put up in sections. The Committee-room was at the same time to have a new glass and iron roof.

The floor of the principal library was to be replaced by steel girders and concrete, paved with oak blocks. All open fireplaces were to be done away with, the lecture-room being heated by steam and the rest of the building by hot water, and special arrangements being made for the admission of fresh and the ejection of foul air. Steam was only preferred to hot water in the case of the lecture-room, because it admitted of raising or lowering the temperature with greater rapidity.

The members confirmed the greater part of the report of the Committee, but, happily for the charm of a room of perfect proportions, they refused to allow a broad flight of stairs to be made from the floor to the gallery at the east end of the principal library. They acknowledged gratefully the zeal, devotion, and business aptitude which the Junior Secretary, Mr. Alfred Holmes, had displayed in the many difficult negotiations and arrangements consequent upon the great catastrophe which I have described. It was also specially mentioned, when the work was at length well and satisfactorily carried out, that the performance had been rather a labour of love to Mr. Rich, the architect employed, than a mere professional duty.

The alterations were indeed proceeded with in a spirit of commendable promptitude, and the rooms were once more thrown open to the members on the 1st October, 1894. There had been many minor changes made which had not been thought of until the work was in progress. In order that there should be less probability of fire spreading to or from the old rooms which kept their wooden floors, ceilings of steel and plaster and marble floors had been inserted at the openings. The whole of the rooms had been lighted with the electric light, the current being obtained from a dynamo driven by a gas engine which was placed in the basement of the new part of the building. The new room on the ground-floor, which had been used for all

purposes connected with the distribution of books during what I may perhaps be allowed to call the interregnum, had since been fitted up as a smoking-room, and was greatly appreciated by the numerous followers of Sir Walter Raleigh. Before so great and salutary a reform had been brought about there was, naturally enough, prolonged discussion and much searching of heart. The idea that it was quite possible for any member who objected to smoking never to enter a new room, not of the first importance and which he would probably never have entered at all but for the fire, seemed one which it was difficult to grasp. But year runs after year, and use and wont speedily begin to exercise their remarkable powers of atonement, and the objections and the predicted downthrows and demoralisations have all ended peacefully in smoke.

It is not necessary for me to go further with this story. The good old Society was never so strong, useful, and flourishing as it is now in the mid-summer of 1896. The membership has increased by leaps and bounds since 1893, just as though the terrible fire had acted as a monstrous advertisement, and Newcastle people had at last awakened to the fact that they had a Literary and Philosophical Society in their midst. On the 1st January, 1896, there were 1652 members on the roll, of whom 247 were associates. This was an increase of 295 over the 1357 of January 1st, 1895, and was indeed a higher number than had ever been reached before. The nearest approach to it was on January 1st, 1872, when there were 1533 members.* It is quite possible that the admission of novels, and the large increase in the number of cheaper magazines subscribed for, account for a considerable proportion of the growth of members, but it

* There are now, in the month of December 1896, 1554 Members and 305 Associates, or together 1859 persons entitled to benefit by the Society.

must not be forgotten that the Reference part of the library has been kept up with exemplary care.

In fact, the success of the Society has been well and fairly earned. Where will you find another Institution which offers you so much for your money? If you are a full member and pay a guinea a year, your wife, your unmarried daughters, and your sons under twenty-one years of age, can become associates at a half-guinea subscription apiece, and have every privilege of ordinary members, excepting that they can neither vote nor take any part in the management of the Society, and may only take out two works at a time.

You yourself may not only vote, but may take out five works at once, only one being a current Magazine or Review.

Then you have a room where you can sit, in quiet and comfort, and consult encyclopædias and dictionaries. The large Library is arranged with sequestered chairs and tables with every provision for quiet study, whilst the tables in the smaller room are covered with periodicals, reviews, magazines, the art monthlies, and the like. You have nearly 50,000 volumes, which have been carefully collected through long years, to consult or to borrow for home perusal, and you have also access to the valuable scientific library in the Mining Institute which belongs to the Coal Trade of Northumberland and Durham. New books you must return to the Library in a fortnight, but books which have been more than a year in the Library you may keep for three weeks.

During the winter months, from October to March, you may listen on each Monday evening, in the comfortable lecture theatre, to a discourse by some man of eminence in the literary, artistic, or scientific world. You may also, if you should be so inclined, benefit each year by two courses of twelve lectures each given by Cambridge University Extension lecturers in the Easter and Michaelmas terms, real educational courses which

are accompanied by conversation or heckling classes, by the writing of essays, and a final examination.

And you have the large and handsome smoking-room, open from 10 A.M. to 9.30 P.M., and in it you can read, or talk, or play at chess. There is already a Chess Club which you may join, and a Shakespeare Society, a Discussion Society, and a Photographic Society with a dark chamber in the basement. These societies have small subscriptions of their own to defray their necessary expenses, but every member of the parent Institution is entitled to attend every meeting which is held in any part of the building, excepting those which only relate to management.

For that building, and all that it contains, belong to the members—to all the members, old and new alike. This happy and generous freedom of constitution was, I believe, unknown when the Literary and Philosophical Society first adopted it.

There have been difficulties, more or less serious, consequent on the relaxation of some of the restrictive rules, the large and sudden accessions of members, the multiplication of domestic Societies which are bound to observe the laws of the Society, but over which the Committee can, in the very nature of things, have but little control. It surely behoves us all to be very careful and very considerate in these matters. We are a Society of friends, and should be anxious to consult the wishes of others in things lawful in preference to our own. Those who feel themselves strong should be willing to condescend to the weaker brethren. Where all are truly equal any endeavour to force conclusions must and ought to fail. Let the young remember that, though the old ones cannot be so wise as they are, they may have gained something by longer experience, and the old recollect that they once were young and thought that

they were the people and wisdom would perish with them. Old and young have alike a serious responsibility accompanying their membership of this Society. It is a true republic, and should acknowledge no dictator. All are equal in power, and should be equally jealous of the good fame and name which have come down to them through long generations.

Two great topics divide friends and make them foes—religion and politics. Those who founded our Society wisely resolved that there should be one place in our good old city where all men and women might meet on neutral ground. Those who are the most thrown into the turmoil and labour of civil or religious strife are the most conscious of the blessing which such a meeting-place affords. Let it be held for ever sacred.

And may the member who, a century hence, continues, with far greater ability, but with no more devotion, the story which I have so far told, be able to say that for usefulness, for liberality, and for numbers, no other local Society, then, as now, excels the good old Literary and Philosophical Society of Newcastle-upon-Tyne.

APPENDIX A.

HINTS for establishing an office in Newcastle for collecting and recording Authentic Information relative to the state of the collieries in its neighbourhood, and the progress that has been made towards ascertaining the nature and constitution of the strata below those seams to which the workings in this country have been confined. By William Thomas, Esq.

September 13th, 1796.

Read at a meeting of the Literary and Philosophical Society of Newcastle-upon-Tyne, and published by order of the Society. 1815.

ALTHOUGH to some it may appear that the plan about to be proposed has more of remote than immediate advantage in view, yet if it is acknowledged that such advantage will be the result, it is to be hoped the measure will not be deemed superfluous, nor considered as having for its object the gratification of an impertinent curiosity rather than the general and permanent welfare of the public. As an institution, however, of the description now contemplated may, on a cursory view of the subject, awaken suspicion, by seeming to demand information on subjects of too delicate and secret a nature, intimately connected with individual property, it may not be improper before we enter on its principles and details, to point out some of the more obvious and immediate advantages to be derived from it, as well as of some other circumstances which appear to be favourable to the undertaking.

When the information, which it will be the business of such an office to collect, and to arrange, shall have been carried to some degree of maturity, by connecting the different properties in the district, with the knowledge (as far as it has been obtained) of the nature of the strata which compose each respective division of that property, a regular history of the various seams of coal existing within each division, may be drawn from such information. By this means, a considerable expense in the article of *boring*, for the purpose of ascertaining the fact, will, in a great measure, be rendered unnecessary, the time employed in that tedious process will be very much abridged, and an effectual *winning* much sooner accomplished. Should suspicions of the efficacy of such information to the full extent, be urged against the plan (and such objections may, perhaps, in some instances appear reasonable enough), yet they by no means destroy the great body of advantages which it is calculated to produce. A very partial boring, where previous information is obtained illustrative of the relative connection of the strata, has, in general, been deemed sufficient authority on which to form a decided opinion of the nature of the whole; and by those who are acquainted with the very great expense incurred in the prosecution of extensive borings, this cannot but be regarded as a very important consideration.

Another considerable advantage to be obtained by this collective information and connection of property is, the knowledge that will be thereby procured with respect to the nature, situation, and direction of the various dikes and interruptions that have been met with, in prosecution of the workings of the respective seams within each individual property. By this information, neighbouring collieries, towards which the direction of these interruptions tends, may be extricated from a too fatal security, and led to make those preparations to meet approaching evils, the necessity of which could not otherwise have been foreseen, ignorant as they must have been that any disaster was likely to happen.

The objection may here be urged, that dikes, or other interruptions, frequent in collieries, vary their direction, and often disappear in

individual workings. But this will not materially diminish the advantages that must accrue in a general point of view; for where any serious interruption to the progress of the workings is apprehended, prudence dictates the use of those precautions which are necessary to its discovery, as well as of those means which are requisite to ascertain the full extent of its effects. And as the steps proper for this inquiry may generally be followed without much inconvenience, security, drawn out of this fund of associated information, may thus be purchased at a very moderate expense.

Naturally growing out of this plan will be the history of the various seams within the neighbourhood, their relative connections, and their continuity through this district; points, which at present, strange as it may appear in a country so peculiarly adapted for discoveries of this nature, are very imperfectly known. This history, gathered from such authentic documents, presents many advantages. The proprietor becomes acquainted with the value and importance of his property; the resources of this country, in the invaluable article of coal, are reduced within the limits of calculation; and the adventurer, who risks his fortune in those expensive and hazardous undertakings, the winning and working of coals, procures to himself a degree of confidence in the attempt, to animate his labours, and to strengthen the hope of a successful issue.

But the further and more important consideration which so forcibly urges the adoption of the plan, to which the present hints are directed, appears to be, that of transmitting to posterity such authentic information relative to the limits of every particular waste, and the full extent of the workings in the respective seams, as to preclude (except by great negligence or inattention) the possibility of any subsequent workings approaching the old wastes too abruptly; thereby placing the lives of a valuable description of men, as well as the property of individuals, in much greater security, and preventing those destructive and melancholy consequences which have but too frequently happened in this country, from the total want, in most instances, of such information. The precaution of previous boring may, by some, be said to provide all the

requisites for preventing the evil complained of. But independently of the expense to be incurred by such a process, it is impossible, in many seams of a tender quality, to pronounce on the sufficiency of a barrier to withstand the weight of water that may be lodged against it, in extensive wastes; or even to guard against the frequent negligence of the workmen employed in boring, to prove the extent of the barrier. Yet the present ignorant state of the country respecting this subject is such, and the limits of old wastes, from which the coal has been wrought prior to the period of traditional testimony, are so imperfectly known, that the remains of old pits, traced on the surface, are the only circumstances to enforce the use of those precautions on which rest so many important consequences. The frequent fallacious ness, however, of such appearances on the surface, and the fatal effects that have ensued from too great security in matters of this nature, are too well known to those interested in the working of collieries, to require more to be said in favour of a plan, which has for its object the collection of such information as will remove every doubt on so important a subject.

I would not be thought by this representation, to entertain the most distant view of infusing into the minds of workmen a distrust of their employers, or a want of confidence in their anxiety to use those means which are necessary for their preservation. Neither would I be withheld, by a false delicacy, from a review of those consequences which, when maturely considered, may lead to the establishment of a plan for procuring information, that will provide for the more permanent safety both of persons and property.

Since, therefore, interest and humanity favour the introduction of such a plan, I shall proceed to the Hints for that purpose, which I proposed to submit to the consideration of the society.

I. That an office be established in Newcastle, for collecting, arranging, and registering the various informations to be from time to time communicated by those persons who are interested in the collection and preservation of such information.

II. That the proprietors of collieries in the neighbourhood be

solicited to subscribe to this institution, and requested to direct their agents or viewers to deliver into the office, so established, plans of the boundaries of their respective properties; and the linings of the workings within the several seams that are in working, with a description of the nature and direction of the interruptions met with in the progress of the works; the thickness of the respective seams; their depth from the surface; and the number, situation, and thickness of the bands existing within them.

III. That a Committee be formed of the principal proprietors resident in or near Newcastle, who shall appoint a superintendent, acquainted with the principles of conducting collieries, to lay down on plans, the various linings of the respective seams; and to arrange and insert into books, prepared for that purpose, all the information which shall from time to time be received respecting dikes, or other interruptions that may occur; together with every other sort of communication relating to the collieries, that may be delivered into the office. The linings to be likewise inserted in the books, containing the report of each individual colliery, and in their proper places, agreeable to the dates when taken.

IV. That the plans of the respective boundaries delivered into this office, by the different proprietors, be reduced by the superintendent to one common standard, and the linings laid down on the same principles; that the connection between the various properties may be ascertained with greater ease, and the direction of the dikes, and other interruptions met with in the works, may be traced through the plans of adjoining collieries with more exactness. By these means the occupiers may reap the reciprocal advantages of such connection of property, and description of dikes, etc., by obtaining time to make the necessary preparations to meet approaching inconveniences, of which they otherwise would be ignorant; and thus the evil become the more intolerable, from the want of proper means to resist it.

V. That a power be invested by the subscribers to this institution, in the Committee for the time being, to direct occasional views of the different collieries connected with the establishment, and to compare

the plans of the linings with the extent of the workings. This is more especially requisite when a colliery gives up working any particular seam; in order to ascertain the precise limits of the waste at the moment the works cease. For on this very circumstance depends, in a great measure, the security which subsequent workings will derive from such collected information. As this is a point to which so much consequence is attached, it is hoped the proprietors will excuse the solicitude here expressed to procure the most perfect intelligence relating to this subject; and that they will therefore give directions to their agents to transmit to the office, early notice of their intentions with respect to this particular; so as to allow sufficient time to make the necessary examination before the means of descending into the workings are removed.

VI. In order to place the information intended to be collected on the most secure footing, it may not be improper to include in the linings, the situation of the winning pit, or the pit from which the linings commence in each particular seam, by a course and distance from the centre of the shaft, to any prominent and permanent object on the surface, that shall be contiguous to the shaft: and that the situation so fixed, be recorded along with the linings. By this arrangement, the evils arising from the loss of plans may be prevented, and the situation of the pit, as well as the extent of the waste, ascertained, by laying down the linings on the surface from the object so selected.

VII. As a collection of the borings made within the neighbourhood, will form an important part of the present scheme, it is confidently expected that the members of the institution will contribute to so desirable an end, by permitting the particulars of those made within their respective properties to be transmitted to the office, for insertion in a book kept expressly for that purpose.

VIII. That the situation of each particular bore-hole be laid down on the respective plans; which will assist the formation of the general history of the seams, by intimately connecting the various intelligence necessary for that purpose.

IX. That all who may become members of this institution, shall

have recourse to the office when they think proper; and shall be at liberty to extract from it such information as they may require. The terms on which non-subscribers may be permitted to receive information from this institution, to be determined by the Committee appointed in conformity to the third article of this scheme.

Should those hints be thought to merit farther consideration, may it not be deemed expedient to appoint a Committee, selected from amongst the members of the Society, to digest them, and to make such additions as a review of the subject, after mature deliberation, may suggest; and that copies of the plan so arranged, be forwarded to the different coal-owners for their consideration?

APPENDIX B.

The following is believed to be a complete list of the lectures which have been delivered in connection with the Literary and Philosophical Society.

The number given is the number of lectures delivered.

1803.

Mechanics, Hydrostatics, and Pneumatics (twenty-one), by the Rev. W. Turner.

1804.

Electricity and Galvanism, Magnetism and the Philosophy of Chemistry (twenty), by the Rev. W. Turner.

1804—5.

Chemistry and its application to the Arts (thirty-two), by the Rev. W. Turner.

1806.

Optics and Astronomy (twenty-two), by the Rev. W. Turner.

1807.

The Philosophy of Natural Appearances (twelve or fourteen), by the Rev. W. Turner.

Botany (ten), by the Rev. W. Turner.

1808.

Theoretical and Practical Mechanics, by the Rev. W. Turner.

1809.

Hydrostatics and Pneumatics, or on the Mechanics of Fluid Bodies (twenty-one), by the Rev. W. Turner.

1810.

The Philosophy of Natural History (twenty), by the Rev. W. Turner.

1811.

Optics and Astronomy, by the Rev. W. Turner.

1812.

The Animal Kingdom (twenty-one), by the Rev. W. Turner.

1813.

The Vegetable Kingdom (twenty), by the Rev. W. Turner.

1814.

The Mineral Kingdom (twenty), by the Rev. W. Turner.

1815.

The Elements of Chemistry (twenty), by the Rev. W. Turner.

1815—16.

The Application of Chemistry to the Arts, Manufactures, Domestic Economy, Agriculture, etc. (thirty-two), by the Rev. W. Turner.

1817.

Electricity and Electro-Chemistry, Magnetism, and the Philosophy of Natural Appearances (twenty-three), by the Rev. W. Turner.

1818.

Mechanics, Hydrostatics, and Pneumatics, by the Rev. W. Turner.

1819.

Optics and Astronomy, by the Rev. W. Turner.

1820—21.

Natural History, particularly of the Animal Kingdom, by the Rev. W. Turner.

1822.

The Vegetable Kingdom (twenty), by the Rev. W. Turner.

1822—23.

The Mineral Kingdom (twenty), by the Rev. W. Turner.

1824—25.

Chemistry (twenty-four), by the Rev. W. Turner.

1825—26.

Mechanics, Hydrostatics, and Pneumatics (twenty-one), by the Rev. W. Turner.

Astronomy, Introductory, by Mr. H. Atkinson.

1827.

Astronomy (ten or twelve), by Mr. H. Atkinson.

Mechanics, Hydrostatics, and Pneumatics, by the Rev. W. Turner.

1827—28.

The Animal Kingdom (twenty-one), by the Rev. W. Turner.

1829.

The Vegetable Kingdom (twenty), by the Rev. W. Turner.

1830.

Mineralogy and Geology (twenty), by the Rev. W. Turner.

Origin and Progress of Civil Society (six), by the Rev. W. Turner, Jun.

1830—31.

Optics and Astronomy, by the Rev. W. Turner.

Acoustics (one), by Professor Adams.

The History and Progress of Knowledge and Education (four), by Mr. W. A. Mitchell.

The Subject and Claims of Hebrew Learning (one), by the Rev. J. Whitridge.

1831—32.

The Phenomena of Natural Appearances, by the Rev. W. Turner.
Electricity and Electro-Magnetism (six), by Mr. Hugh Lee Pattinson.
Political Economy, by Mr. — Arnaud.
The Structure and Functions of the Eye (one), by Mr. T. M. Greenhow.
Architecture, by Mr. Higham.

1833.

The Improvement of the Mental Faculties, and the means of facilitating the acquirement of Knowledge (three), by Dr. W. H. Crook.
Mechanics, Hydrostatics, and Pneumatics, by the Rev. W. Turner.
Chemistry (twenty-two), by Mr. James F. W. Johnston.

1834.

Mineralogy and Geology (twenty), by Professor Phillips.

1835.

Phrenology (sixteen), by Mr. George Combe.
The Laws of Organic and Inorganic Nature (six), by Dr. Knott.

1836.

The Philosophy of the Human Mind (twelve), by Mr. John Taylor.
The British Poets (six), by Mr. James Montgomery.
The Steam Engine, and its application to transport by Land and Water (twelve), by Dr. Dionysius Lardner.
The State of Education in Ireland (one), by Mr. Robert Ingham, M.P.
Educational Philosophy (eight), by Mr. James Simpson.

1837.

The Science of Music, and on the genius and character of the most celebrated Composers (twelve), by Professor Adams.
The Principles of Art (twelve), by Mr. W. Warren.
Botany (twelve), by Sir William J. Hooker, LL.D.
Dramatic Literature (six), by Mr. J. Sheridan Knowles.

1838.

The Study of Mathematics, Astronomy, etc. (two), by Mr. Snape.
English Vocal Harmony (four), by Professor Edward Taylor.

1839.

The Education of the Blind and of the Deaf and Dumb (two), by Mr. Collier.
The Harmony and Order of Celestial Phenomena (twelve), by Professor Nichól, LL.D.
Medical Jurisprudence (one), by Dr. Lynch.
Practical Chemistry (one), by Mr. Glover.
The Advantages of the Study of Botany (one), by Mr. John Thornhill.
The Animal Kingdom (twelve), by Professor T. Rymer Jones.

1840.

The Antiquities of Egypt, or more properly on the Origin of the Worship of Animals, of Polytheism, Mythology, and Idolatry (fourteen), by the Marquis di Spineto.
The Imperfectness of Historical Record (two), by Mr. James Montgomery.
Acoustics and Optics (fifteen), by Mr. Robert Addams.
The Law of Storms (two), by Professor Espy.

1841.

The Present State of the British Drama (one), by Mr. Eugene Macarthy.
The Application of Mineralogy to the Arts and Manufactures (twelve), by Dr. Andrew Ure.
The Structure and Functions of Insects (four), by Mr. Henry Goadby.
Mathematics, their value as a Mental Discipline (one), by Mr. Snape.
The Applications of Chemistry to Medicine (one), by Dr. Glover.
Electricity and its Related Branches (fifteen), by Mr. Addams.
Geology: the general arrangement of Rocks and of the Composition and Deposition of Coal (two), by Mr. King.

1842.

Astronomy and Geology (ten), by Mr. D. Macintosh, Jun.
America (six), by Mr. J. S. Buckingham.
India and England (two), do.
Chemistry (twenty), by Mr. Robert Addams.
Glaciers (one), by Mr. Sopwith.

1843.

The Subordinate Characters in the Plays of Shakespeare (eight), by Mr. C. Cowden Clarke.

The Early History, Present State, and Future Prospects of Poland (three) by Count H. Krasinski.

1844.

The Means, Advantages, and Duty of Intellectual Cultivation (one), by Mr. Snape.
Combustion and Respiration (two), by Dr. Glover.
Hydro-Electricity (two), by Mr. W. G. Armstrong.
Animal Mechanics (two), by Dr. Embleton.
Economic Geology (two), by Mr. Sopwith.
Phonography (one), by Mr. Barkas.
English Poetry (eight), by Mr. C. Cowden Clarke.

1845.

English Church Music (six), by Professor Edward Taylor.
Geology (twelve), by Professor Ansted.
The Employment of a Column of Water as a Motive Power for propelling Machinery (three), by Mr. W. G. Armstrong.
Agricultural Chemistry and Geology (twelve), by Professor Johnston.
The Characteristics of the different styles of Gothic Architecture, by the Rev. J. C. Bruce.

1846.

The Subordinate Characters of Shakespeare's Plays (eight), by Mr. C. Cowden Clarke.
Pneumatics (one), by the Rev. J. C. Bruce.
The Divina Commedia, by Signor Bompiani.
The Races of Men (six), by Dr. Knox.
The Social and Literary State of Italy from 1746 to our own time (one), by Signor Bompiani.

1847.

English Grammar as a portion of English Scholastic Education (one), by Mr. Snape.
Castellated Architecture (five), by the Rev. J. C. Bruce.
The Chivalric and Epic Poetry of Italy (three), by Signor Bompiani.
The Sanitary Condition of Newcastle (one), by Dr. Robinson.
The Circulation of the Blood (four), by Dr. Embleton.

The Origin, Progress, and Extinction of the Italian Banditti (one), by Signor Bompiani.

1848.

The Comic Writers of England (four), by Mr. C. Cowden Clarke.

1848—49.

The Roman Wall (five), by the Rev. J. C. Bruce.
The Celebrated Literary Women of Italy (one), by Signor Bompiani.
Attempts to localise the Nervous Functions and Phrenology (two), by Dr. Glover.
The Respiration of Animals and Plants (two), by Dr. Embleton.
The English Dramatic Poets who preceded Shakespeare (two), by Mr. John Turner.
The European Volcanoes (two), by Dr. Charlton.

1849—50.

The Curiosities of Natural History (six), by Professor T. Rymer Jones.
The Bible in the Dark Ages (one), by the Rev. Dr. Gilley.
The History of Ecclesiastical Architecture in England (one), by Mr. J. S. Lotherington.
Ecclesiastical Statesmen (four), by the Rev. J. G. Rogers.
The Circulation of the Blood (two), by Dr. Robinson.
Early Italian Navigators (one), by Signor Bompiani.
The Plagues of Europe (one), by Dr. Heath.
The Minor Dramatic Poets Contemporary with Shakespeare (four), by Mr. John Turner.
Nature and Art (one), by the Rev. Dr. Davies.
The Distribution and Division of Wealth (three), by Mr. George Ramsay.
Certain of the more Obscure Poets of the Age of Elizabeth (one), by the Rev. R. C. Coxe.
The Philosophy of Medicine (one), by Dr. Glover.

1850—51.

Ornamental Art (five), by Mr. R. N. Wornum.
The History and Genius of the German Language (one), by Mr. J. D. Löwenberg.
Great Cities of the Ancient World (three), by the Rev. J. G. Rogers.

Newcastle-upon-Tyne: its Memorabilia and Characteristics (three), by Mr. G. Bouchier Richardson.

Language as an Instrument of Thinking and Communicating Thought (one), by Dr. Dodd.

Poetry, Painting, and Music, their Attributes and Mutual Relations (one), by Mr. W. Sidney Gibson.

The Philosophy of Liberal Studies (two), by Mr. James Snape.

The Connection of the Mind with the Organisation of the Brain and Nerves (one), by Sir John Fife.

The Revolution in Italy, headed by Arnaldo di Brescia, di Rienzo, Giovanni da Procida, and Massaniello (three), by Signor Bompiani.

Peter the Hermit, the First Crusader (one), by Mr. William Bainbridge.

Some account of Bishop Hall's "Mundus Alter et Idem" (one), by the Rev. R. C. Coxe.

Printing (two), by Mr. R. Burdon Sanderson, Jun.

The Life and Writings of Akenside (one), by Dr. Robinson.

English Secular Music (four), and one on English Sacred Music, by Prof. Sir H. R. Bishop.

The late Discoveries of changes in the appearance of the Planet Saturn (one), by the Rev. Prof. Chevallier.

1851—52.

Chemistry (six), by Professor Pepper.

The Picturesque of Early History and the Ideal of Ancient Egypt (two), by Mr. Josiah Gilbert.

Popular Botany (four), by Mr. Daniel Oliver, Jun.

The English Border during the Middle and Later Ages (two), by Mr. G. B. Richardson.

Cell Life and Sound (two), by Dr. Heath.

Language as a Medium for Communicating Thought (one), by Dr. Dodd.

The Extinct Gigantic Birds of New Zealand (one), by Dr. Embleton.

The Rise and Fall of the Spanish Power (three), by the Rev. J. G. Rogers.

1852—53.

Astronomy (six), by Professor Nichol.

The Harp (three), Mr. F. Chatterton.

The Advantages derivable from Archæological Investigation (one), by Dr. Daniel Wilson.

Japan and the Japanese (two), by Dr. C. P. Downing.
The Causes and Prevention of Accidents in Coal-mines (one), by Dr. George Fife.
The Bayeux Tapestry (five), by the Rev. J. C. Bruce.
Calico Printing (three), by Mr. William Crowder.
Reading, by Miss Glynn.
Photography, by Mr. A. S. Stevenson.
Electricity, Galvanism, and Electro-Magnetism (six), by Prof. Pepper.

1853—54.

The Old English Ballads (two), by Mr. Samuel Reay.
India (three), by Dr. Buist.
The Rise and Fall of the Roman Republic (six), by Mr. C. Knight Watson.
Archæological Discoveries in the East (one), by Mr. C. Fiott Barker.
The Physiology of Plants (six), by Dr. Edwin Lankester.

1854—55.

The Heroes of the English Commonwealth (four), by Mr. P. E. Dove.
The Border and its Men (two), by the Rev. J. H. Paterson.
Light and Heat (six), by Prof. Hunt.
Thomas Hood (one), by Mr. C. Cowden Clarke.
Shakespeare (three), by Mr. John Taylor.
The Local Memorials of George Stephenson (one), by the Rev. Dr. Bruce.
The Arctic Regions (one), by Lieut. Bedford Pim.

1855—56.

Four of the Great European Novelists, by Mr. C. Cowden Clarke.
The Harp and Harp Music (two), by Mr. F. Chatterton.
The Phenomena and Theory of Revolving Storms (four), by Mr. Thomas Dobson.
Popular Scientific Errors (two), by Dr. Edwin Lankester.
Arctic Discovery (one), by Captain Collinson.
Extinct Animals (two), by Mr. Waterhouse Hawkins.
The Siege of Kars (one), by Dr. Sandwith.

1856—57.

The Field Sports of Scotland (two), by Mr. P. E. Dove.
The Arctic Regions (one), by Captain Bedford Pim.

The Manufacture of Glass and Iron (six), by Mr. Crowder.
The Songs of Scotland (one), by Mr. George Brewis.
The Music of Various Nations (two), by Mr. Phillips.
Marine Zoology (four), by Mr. P. H. Gosse.
Music (two), by Mr. Henry Phillips.
Astronomy (four), by Professor Nichol.
Drawing (two), by Mr. John Burnet.
Light and Chemistry (six), by Mr. Pepper.
Three Dramatic Readings, by Mr. Henry Nicholls.
Trajan's Pillar (four), by the Rev. Dr. Bruce.
Phonography (one), by Mr. T. P. Barkas.
The Moon (one), by Mr. John Watson.
Poetic Literature (four), by Mr. Gerald Massey.
The Origin of the Names of Places, Rivers, and Mountains, particularly in Northumberland (one), by Dr. Dodd.
The Fancies of Science (one), by Mr. Hargreaves.

1857—58.

Poetry and Painting (four), by Gerald Massey.
Subjects of Natural History (three), by William Kidd.
Music (two), by Henry Phillips and Mrs. Robert Grosvenor.
Cromwell (one), by the Rev. G. R. Moncreiff.
Lepers and Leper Houses (one), by Dr. Charlton.
Recent Astronomical Discoveries (four), by Professor Nichol.

1859.

This year the new Lecture Room was being built.

1860—61.

The Prevention of Accidents in Coal-mines (one), by Mr. P. H. Holland.
The Ballads and Legends of Northern Europe (one), by Dr. Charlton.
The Solar Eclipse of 1860 (one), by the Rev. Prof. Chevallier.
Roman Coins: their Historical, Architectural, and Artistic Uses (one), by the Rev. Dr. Bruce.
The Fate of Sir John Franklin and his Companions (one), by Captain W. Parker Snow.
Voltaic and Magnetic Electricity (three), by Mr. Edward Wheeler.

Samuel Pepys and his Diary (two), by Mr. George Dawson.
Cardinal Wolsey: his Genius and his Views (two), by Dr. J. C. Daniel.
Flesh-Forming Food and Animal Food (two), by Dr. Lankester.
The Romantic Poets of the Nineteenth Century, by Prof. John Nichol.
A Personal Visit to the Seven Churches of Asia and Fairies (two), by the Rev. Henry Christmas.
An Evening with Thomas Hood (one), by Mr. Walter Bowton.
Three Dramatic Readings, by Mr. Henry Nicholls.
Queen Elizabeth (two), by Dr. Daniel.
Egypt and Syria (three), by the Rev. John Sibree.
Elocution (three), by Prof. Greenbank.
The Occult Powers of Nature (one), by Mr. Robert Hunt.

1861—62.

John Bunyan—Old Books (two), by Mr. George Dawson.
Physical Geography (six), by Prof. Ansted.
The Harp (three), by Mr. F. Chatterton.
Geology (six), by Professor Morris.
Readings (three), by Mr. Walter Rowton.
Electricity, Spectrum Analysis, and the New Dyes from Coal Tar (three), by Dr. Dalzell.
The Four Stuarts (four), by Dr. Daniel.

1862—63.

Readings (three), by Mr. Henry Nicholls.
Readings (three), by Rev. J. M. Bellew.
On Character in the Fine Arts (two), by Mr. J. Bell.
The Welsh Harp (three), by Mr. F. Chatterton.
Astronomy (six), by Prof. A. Herschell.
Chemistry (three), by Dr. Dalzell.
Chemistry (six), by Dr. H. M. Noad.

1863—64.

Iron as applied to Steam Engines and Natural Laws (two), by Mr. William Fairbairn.
Telegraphy (two), by Mr. N. J. Holmes.
The Philosophy of Mathematics (six), by Rev. James Snape.

Mechanical Engineering (eight), by Mr. J. F. Spencer.
Hydraulic Machinery (one), by Mr. Percy Westmacot.
Elocution (three), by Prof. Greenbank.
Textile Fibres and Fabrics (three), by Prof. Archer.
Martin Luther, Erasmus, and Dr. Johnson (three), by Mr. George Dawson.
Ornamental Art (four), by Mr. C. Draper.
Modern German Literature (three), by Prof. Kinkel.
Microscopical Investigation, as applied to Geology (two), by Prof. Rupert Jones.
Vocal Part Music (two), by Prof. John Hullah.
The History of Chemistry (six), by Dr. Bernays.
Physical Geography (four), by Mr. E. W. Brayley.

1864—65.

Hamlet, Shakespeare, and Sir Thomas More (three), by Mr. George Dawson.
The Harp (three), by Mr. F. Chatterton.
The Uses of Mammalia, Birds, and Insects (three), by Prof. Archer.
Readings (two), by Rev. J. M. Bellew.
Modern Pianoforte Music, by Mr. William Rea.
Readings (two), by Mr. Henry Nicholls.
The Distribution of Species and the Unity of the Human Species (two), by Prof. Rolleston.
Greek Art (two), by Prof. Kinkel.
Biology (one), by Dr. Gibson.
The Transition Period of Musical History (three), by Prof. John Hullah.
Organic Chemistry (six), by Dr. Bernays.
Thomas Arnold and Thomas Chalmers, and Hugh Miller's "Testimony of the Rocks" (two), by Rev. George Gilfillan.
Magnetism, and its applications to Modern Inventions (two), by Mr. N. J. Holmes.
Modern Pianoforte Music (two), by Mr. William Rea.

1865—66.

The Physical Accompaniments of the Mind (three), by Prof. Bain.
Readings (three), by Rev. J. M. Bellew.
Paintings and Painters (two), by Mr. Henry Ottley.

The Runic Inscriptions of Great Britain (one), by Dr. Charlton.
The Relations of Great Men to Women (two), and Thackeray's "Vanity Fair," by Mr. George Dawson.
The Mechanical Properties of Air (three), by Prof. Pepper.
The Evidences of Geological Time (three), by Prof. A. C. Ramsay.
Mozart (two), by Mr. William Rea.
Age of Ice in Scotland and Characteristics of Scottish Scenery (two), by Rev. H. W. Crosskey.
Personal Travels in Greece (one), by Mr. G. O. Trevelyan, M.P.
The Ocean (two), by Mr. W. Page.
Electrical Torpedoes (two), by Mr. N. J. Holmes.
Natural History (two), by Rev. T. Hincks.

1866—67.

Prevailing Errors on the Mind (three), by Prof. Bain.
Cosmical Philosophy (three), by Prof. Brayley.
Coal and Coal Formations (three), by Mr. Page.
Shells and their Inhabitants (two), by the Rev. T. Hincks.
Solar and Stellar Chemistry, by Prof. Roscoe.
The Genius and Works of Hogarth, Leech, and Landseer (three), by the Rev. A. L. Simpson.
The Progress of Telegraphy (two), by Mr. N. J. Holmes.
The New England States (three), by Mr. Moncure D. Conway.
Readings (two), by Miss Murray.
The Times of the Reformation (three), by Mr. J. A. Froude.
Unitary System of Chemistry, or the New Notation (three), by Prof. Bernays.
Structural and Systematic Botany (four), by Prof. Henslow.
Mozart's Operas (two), Mr. William Rea.
The Absorptive and Radiative Properties of Bodies with reference to Heat, Light, Spectrum Analysis, etc. (three), by Prof. Balfour Stewart.
Travelling by Sea in the 18th and 19th Centuries (two), by Mr. J. F. Spencer.
Common Air, by Dr. R. Angus Smith.
Chemistry (twelve), by Prof. Freire-Marreco.

1867—68.

Recent Investigations in Geology (three), by Prof. Ansted.
Nature in the Tropics (three), by Mr. A. R. Wallace.

Recent and Fossil Birds (two), by Prof. Owen.
The Tumuli of the Yorkshire Wolds, by the Rev. W. Greenwell.
Readings (three), by Miss Murray.
The Heat of Chemical Action (three), by Prof. Odling.
Milton (three), by Prof. J. R. Seeley.
The Animals of the Ancient Writers, Sacred and Profane (three), by Prof. Rolleston.
The Antiquity of Man in the South-West of England (three), by Mr. Pengelly.
The Philosophy of Physical Science in its Most Recent Developments (four), by Mr. Robert Hunt.
Recitals: Pianoforte and Vocal Music (three), by Mrs. J. Macfarren.
An Old Greek War (one), by Mr. G. O. Trevelyan, M.P.

1868—69.

Italy's Place in Politics, Science, and Letters (three), by Prof. Leone Levi.
The Crust of the Earth (one), by Mr. J. B. Simpson.
The Pendulum and its application to Horology (one), by Mr. J. G. Allison.
Fossil Remains in the Northumberland Low Main Coal Seam (one), by Mr. T. P. Barkas.
The Exhaustion of Coal (two), by Prof. Jevons.
Three Pianoforte Recitals, by Mrs. Macfarren.
Botany (three), by the Rev. Prof. Henslow.
Glimpses of the World's Great Continents (three), by Dr. Page.
The Involuntary Movements of Animals (two), by Prof. Michael Foster.
The Distribution of Animals (three), by Prof. Huxley.
Glaciers of Switzerland and Greenland (three), by Mr. Edward Whymper.
Lord Halifax, Adam Smith, and William Cobbett (three), by Prof. J. E. Thorold Rogers.
Semitic Folk Lore, Phœnicia, and the Talmud (three), by Mr. Emanuel Deutsch.
The Geological Causes which have brought about the present Scenery of Britain (three), by Prof. Geikie.
Some of the Effects of Heat (three), by Dr. Bernays.
Coleridge, Scott, and Tennyson (three), by Mr. George Macdonald.
Colbert's Administration (two), by the Rev. Canon Ashwell.
Weber and Beethoven (two), by Mr. Rea.
Chemistry (twenty-five), by Prof. Freire-Marreco.

English Language and Literature (twenty-five), by Mr. R. Spence Watson.

Engineering (twenty-five), by Mr. Wallau.

Mathematics: Senior and Junior Courses (twenty-five each), by Mr. T. Dobson.

Music (twenty-five), by Mr. William Rea and Mr. F. Helmore.

The Facilities and Grants of Money now offered by the Government for Scientific Education (one), by Mr. J. C. Buckmaster.

Explorations being carried on in Palestine (one), by the Rev. Charles Boutell.

1869—70.

Sir David Lindsay of the Mount (two), by Prof. Henry Morley.

Musical History, Discrimination of Style, Music in two Aspects, Art and Science (three), by Prof. the Rev. Sir Frederick A. Gore Ouseley.

The Chemistry of the Breakfast Table (three), by Prof. Bernays.

The Great Prairies and the Rocky Mountains (two), by Mr. W. Hepworth Dixon.

The Sun (two), by Prof. J. Norman Lockyer.

The Modes of Sepulture Employed in England from the Fourth to the Seventh Centuries (two), by Prof. Rolleston.

Maritime and Inland Discovery (three), by Mr. Henry Kingsley.

The Roman Wall (one), by the Rev. Dr. Bruce.

Waves (two), by Prof. W. J. Macquorn Rankine.

The Ice Age in Britain (three), by Prof. Geikie.

Mathematics: a Senior and Junior Course, and a Course for Ladies (twenty-five each), by Mr. Thomas Dobson.

The History and Development of the English Language (fifteen), by Mr. R. Spence Watson.

Physics (twelve), by Prof. Freire-Marreco.

Inorganic Chemistry (six), by Prof. Freire-Marreco.

Music (twelve), by Mr. Marshall H. Bell.

Greek (six), by the Rev. Dr. Snape.

The Study of Language (one), by the Rev. Dr. Snape.

Two Readings, by Miss Glynn.

The Fishes and Reptiles of the Carboniferous Period (one), by Mr. T. P. Barkas.

Napoleon I. and Napoleon III. (two), by Prof. J. R. Seeley.

1870—71.

The South African Gold Fields (one), by Sir John Swinburne, Bart.
The Physical Geography and History of the Holy Land, the Sahara, and North Africa (three), by the Rev. H. B. Tristram.
Miracle Plays, with special reference to the Passion Play at Ober-Ammergau, 1870 (one), by Mr. R. Spence Watson.
Solar and Lunar Eclipses, the Stars, and the Nebulæ (three), by Mr. R. A. Proctor.
Recent Formations, and the Tales they tell (three), by Dr. Page.
The Best Society, and the Vexed Question (two), by Miss Emily Faithfull.
Beau Brummell, Letter Writing and Letter Writers, Dean Swift (three), by Mr. George Dawson.
Experiences with the Balloon, Rain (two), by Mr. J. Glaisher.
The Secular Music of England (three), by Mr. G. A. Macfarren.
The Philosophy of the Dinner Table (three), by Prof. Bernays.
Science: its Social and Moral Influence (one), by the Rev. Dr. Snape.
French Literature on the eve of the Great Revolution (two), by Prof. W. B. Hodgson.
Iceland: its Literature and Folk Lore (three), by Mr. Jon. A. Hjaltalin.
English Universities (two), by Mr. W. G. Clark.
The Mechanics of Engineering (twelve), by Mr. Thomas Dobson.
Mathematics—Junior Course (twelve), by Mr. W. Lyall.
The History of the English Language (twelve), by Mr. R. Spence Watson.
Music—a General Class and a Class for Ladies (twelve each), by Mr. M. H. Bell.
From the Atlantic to the Pacific (one), by Mr. T. Eustace Smith, M.P.
French Literature (twelve), by M. Auguste Anatole Liégaux.
Science: its Special Value and Moral Influence (one), by the Rev. Dr. Snape.
Boston and Baltimore, Education and Elections (one), by Mr. T. Eustace Smith, M.P.
Recent Discoveries in the Carboniferous Strata of Northumberland (one), by Mr. T. P. Barkas.

1871—72.

Some Early Ideas in Chemistry (three), by Dr. Odling.
Two Readings, by Mr. C. Roach Smith.
Pottery and Porcelain (two), by Mr. W. Chaffers.

The Saga Literature of Iceland, The Older or Poetic Eddas, The Social and Domestic Condition of the Northerners in Early Times (three), by Mr. Eirekir Magnisson.

The Education of Women, the Enfranchisement of Women, National Debts (three), by Mrs. W. Garrett Fawcett.

Sleep: its Uses and Abuses (one), by Dr. Humble.

The Characteristic Differences between the Histories of England and France (one), by the Very Rev. Dean Lake.

Arctic Explorations (two), by Dr. Rae.

The Religions of Races (three), by Mr. Moncure D. Conway.

The Human Senses (two), by Prof. G. Croom Robertson.

The British Empire (two), by Prof. J. R. Seeley.

Some of the Characteristics of Modern English Literature (one), by Mr. R. Spence Watson.

Palæontology (three), by Prof. J. Young.

Science: its Social Value and Moral Influence (two), by the Rev. Dr. Snape.

Lord Bacon's Philosophy compared with German Thought; compared with English Thought (two), by Dr. J. T. Merz.

Eclipses (two), by Mr. J. Norman Lockyer.

The Physical Conditions and the Life of the Deep Sea, the Gulf Stream (three), by Prof. W. B. Carpenter.

Music (twelve), by Mr. Marshall H. Bell.

Modern English Literature (fourteen), by Mr. R. Spence Watson.

1872—73.

Divine Contrivances in Nature (one), by Prof. S. Haughton.

Water: its Nature, Circulation, and Functions (two), by Prof. Page.

Art (one), by Mr. G. Redford.

The Life, Character, and Works of Faraday (two), by Mr. J. H. Gladstone.

Impressions of India (one), by Mr. T. Eustace Smith, M.P.

Coleridge, August von Schlegel (two), by Dr. J. T. Merz.

The Faust Legend (two), by Mr. F. Hüffer.

The Progress of Solar Research (two), by Mr. J. N. Lockyer.

The Two Pitts (two), by Prof. J. R. Seeley.

English Literature in the time of the Commonwealth (two), by Mr. W. B. Donne.

Woman's Education at American Universities, by Miss M. E. Beedy.

Caedmon, Robert Browning (two), by Mr. R. Spence Watson.
The Development of Music in Connection with the Drama (two), by Mr. E. Dannreuther.
Stellar Astronomy (two), by Prof. R. Grant.
Oil Coals, Oil Shales, and Oil Wells (three), by Mr. A. Taylor.
Polarized Light (two), by Mr. W. Spottiswoode.
Early Moral and Political Condition of Mankind (two), by Mr. E. B. Tylor.

1873—74.

The Roman Wall—Recent Investigations (two), by the Rev. Dr. Bruce.
Recent Explorations in Moab (two), by the Rev. Canon Tristram.
Robespierre, Danton (two), by Mr. John Morley.
The Piano, its History, Mission, and Influence (two), by Mr. Carlo Tiesset.
The Historic Caves and their place in British History, the Neolithic Caves and their evidence as to the Ancient Ethnology of Europe (two), by Mr. W. Boyd-Dawkins.
Stein, the Reformer of Prussia (two), by Prof. J. R. Seeley.
Society in the North of England in the last Century (one), by Dr. Charlton.
The Physical Geography of Inland Seas, Foraminiferal Life past and present, (two), by Dr. W. M. Carpenter.
Travels in the Disguise of a Dervish through various countries in Central Asia (two), by Prof. A. Vambery.
Reminiscences of a Visit to Egypt in 1872 (four), by Sir W. G. Armstrong.

1874—75.

The Discovery of the Temple of Diana, The Results of the Excavations at Ephesus (two), by Mr. J. T. Wood.
The Influence of Poetry on Science, Art, and Human Belief; Æsthetic Culture (two), by Mr. J. Devey.
The Legends of Izdubar and the Chaldean Account of the Deluge, Points of Contact between the Bible and Assyrian Inscriptions, The Manners and Customs of the Assyrians (three), by Mr. George Smith.
The Closing Scenes of the Earth's Geological History (two), by Prof. W. C. Williamson.
The French Revolution (two), by Prof. J. R. Seeley.
Des Cartes and his Philosophy (one), by Dr. J. T. Merz.
Claudian, the last of the Roman Poets (two), by Mr. T. Hodgkin (now Dr. Hodgkin).

Reminiscences of a Voyage to Ceylon (one), by Mr. W. J. Barkas.
Art (two), by Ford Madox Brown.

1875—76.

English Dramatic Music (two), by Mr. W. Rea.
The Geology of Northumberland and Durham (two), by Prof. G. A. Lebour.
The Mythology of our German Forefathers (two), by Mr. Karl Blind.
Utilitarianism; Education Reform; The Prussian System (three), by Prof. Blackie.
Toughened Glass, by Mr. J. D. Cogan.
Don Quixote, A Recent Tour in America, Literary Forgeries (three), by Mr. George Dawson.
Geology, its Scientific Teachings and Economic Value (two), by Prof. Page.
Shelley, his Life and Poems (two), by Mr. W. M. Rossetti.
Nine Months in America, American Poets (two), by Miss Emily Faithfull.

1876—77.

Cowper, Burns; Scott, Wordsworth (two), by Prof. J. Nichol.
The Northumbrian Small Pipes (one), by the Rev. Dr. Bruce.
Domestic Cookery (one), by Mr. J. D. Cogan.
The Colours of Animals and Plants, their causes and their uses (two), by Mr. A. R. Wallace.
Carl Maria von Weber (two), by Mr. W. Rea.
The Arctic Regions and the Hudson's Bay Territory (two), by Dr. Rae.
The Geological History of the Islands of the Ocean as revealed by their Birds (two), by the Rev. Canon Tristram.
Mohammed and Mohammedanism (two), by Mr. R. Bosworth Smith.
A Visit to the United States (one), by the Hon. E. Lyulph Stanley.
The History and Eccentric Form of the English Language (two), by Prof. Meiklejohn.
The Poetic Interpretations of Nature as distinguished from the Scientific, Wordsworth as an Interpreter of Nature (two), by Principal Shairp.
An Hour with the Microscope: Carnivorous Plants and Flower-fertilising Animals (two), by the Rev. W. H. Dallinger.
Giotto's Gospel of Labour (two), by Prof. Sidney Colvin.

1877—78.

Popular Russian Tales (two), by Mr. W. R. S. Ralston.
Two Pianoforte Recitals, by Mrs. John Macfarren.
Health in Great Cities (two), by Dr. B. W. Richardson.
Beranger, Victor Hugo (two), by Mr. W. H. Pollock.
Some Mathematical and Moral Aspects of Gambling (one), by Prof. W. S. Aldis.
The Progress of Sanitary Science, Sanitary Arrangements in Houses (two), by Prof. Corfield.
The Religion and Morality of Shakespeare's Works, Readings from English and American Authors (two), by Mr. C. J. Plumptre.
The History of some of our Domestic Animals (two), by Prof. Rolleston.
Parody, the Premature in Education (two), by Prof. Meiklejohn.
Some of the Forms of Poetry as Developed in English Poetry (one), by the Rev. Canon Dixon.
The Growth and Old Age of Worlds (two), by Mr. R. A. Proctor.
Pottery and Porcelain Glass (two), by Prof. Archer.
Men of the Italian Renaissance (one), by the Rev. Mandell Creighton.
Investigations into the Origin and Development of Minute Organic Forms, with consideration of the bearing of these upon the origin of Bacteria, by the Rev. W. H. Dallinger.
The Economics of Mr. Ruskin (two), by Prof. W. B. Hodgson.
Miss Martineau: her Life, her Writings, her Critics (two), by Mrs. Henry Fawcett.

1878—79.

Pianoforte Recital (one), by Mr. W. Rea.
Progress of Science in Japan (one), by Prof. R. W. Atkinson.
Man: his Relation to the Material Universe (one), by Mr. T. P. Barkas.
Early Struggles for German Freedom and Union (two), by Mr. Karl Blind.
Aquileia, the Precursor of Venice (one), by Mr. Thomas Hodgkin.
The Northumberland Small Pipes (one), by the Rev. Dr. Bruce.
Over Production (one), by Prof. W. Steadman Aldis.
The Chinese Written Characters: Ancient Chinese Civilisation as indicated by the Characters (two), by Prof. the Rev. J. Legge.
Readings from Popular Authors (one), by Mr. W. J. Morrison.
Bismarck (one), by Prof. J. R. Seeley.
Genius, by Dr. Gibson.

The Dwarf Races of Mankind (two), by Dr. Embleton.
Some Characteristic Differences of German and English Literature (one), by Dr. J. T. Merz.
Justinian and his Times (one), by Prof. James Bryce, M.P.
English Dialects: their Classes and Sounds (two), by Mr. Alex. J. Ellis.
The Electric Light (one), by Mr. J. W. Swan.
The Influence of the Bible on Literature (one), by the Rev. J. B. Meharry.
Central Africa (one), by Mr. Donald Mackenzie.
Experiences during the present War (one), by Mr. Archibald Forbes.

1879—80.

The Northumberland Pipes (one), by the Rev. Dr. Bruce.
Pianoforte Recital (one), by Miss Hildegard Werner.
A Literary Lady of the Sixteenth Century (one), by the Rev. Mandell Creighton (now Bishop of London).
Fish and Fisheries (one), by the Rev. Canon Tristram.
The Duke of Wellington, Theodore Hook (two), by Lord William P. Lennox.
The Great Pyramid (one), by Mr. Waynman Dixon.
Tyneside before the Norman Conquest (one), by Mr. James Guthrie.
Edgar Allan Poe (one), by Major Jones.
The Underground Geology of London (one), by Mr. J. E. Taylor.
Radiant Matter (two), by Mr. W. Crookes.
Robin Hood and the Forest Outlaws, Kings and their Fools (two), by Mr. Willmott Dixon.
Niccola Pisano (one), by Mr. Robert Spence Watson.
The Philosophy of Liberal Studies (one), by the Rev. Dr. Snape.
Pegasus, or the Story of an Old Horse, by the Rev. Canon Dixon.
David Hume, Benedict Spinoza (two), by Prof. W. Knight.
Lord Stowell (one), by Mr. Gainsford Bruce.
The Electric Light (one), by Mr. J. W. Swan.
Water in Relation to Health (one), by Mr. J. A. Russell.
Further Researches on the Origin of the Minutest Organisms (one), by the Rev. W. H. Dallinger.
Modern Italy (two), by Mr. Oscar Browning.
Discovery of Roman Remains at Vinovium (Binchester) (one), by the Rev. Dr. Hoopell.

1880—81.

Progress of Electric Lighting (one), by Mr. J. W. Swan.
On the History of the Violin (one), by Miss Werner.
Mental Powers of the Lower Animals, Mental Evolution (two), by Mr. G. J. Romanes, F.R.S.
Our Musical Form (one), by Mr. W. Rea.
Life under Water and Underground (two), by Rev. J. G. Wood.
The Argonauts of '49, or Early Life in California (one), by Mr. Bret Harte.
Emily Brontë (one), by Mr. T. Wemyss Reid.
Phosphorescence and Luminous Paint (one), by Prof. A. Freire-Marreco.
The Ancient Inhabitants of Britain (two), by Dr. Embleton.
Fröebel's Educational Principles in the Kindergarten (one), by Miss M. E. Bailey.
Deep Sea Dredging and Corals (two), by Mr. H. N. Moseley, F.R.S.
The Philosophy of Leibnitz (one), by Dr. Merz.
The Wives of Poets (two), by Mr. W. M. Rossetti.
The Doctrine of Evolution: its Strength and Limits; Poetry and Science (two), by Prof. W. Knight.
The Coins of the Bible (one), by the Rev. J. C. Bruce.
Trade: its Recent Depression and Future Prospects (one), by Prof. the Rev. W. M. Ede.
Continued Researches on the Origin of Life and Development of Lower Organisms (two), by the Rev. W. H. Dallinger.
Two Odd Fellows, the New Education (two), by Prof. J. M. D. Meiklejohn.
The Use and Abuse of Language (one), by Mr. E. A. Freeman.

1881—82.

A Visit to Madeira in the Winter of 1880-81 (two), by Dr. Embleton.
The Elements of Musical Composition (one), by Mr. W. Rea.
Hinduism and Christianity Contrasted (one), by Sir C. E. Trevelyan, Bart.
A Visit to the Saalburg; or the Roman Wall in Germany (one), by Mr. T. Hodgkin.
Conference Concert on Mendelssohn (one), by Mr. Carlo Tiesset.
London English and Glasgow Scotch, a Contribution to British Philology (one), by Rev. H. Batchelor.
The Dynamical Force of Thought (one), by Rev. W. D. Ground.
Natural and Artificial Colouring Matters (two), by Dr. Stevenson Macadam.

A Ride through the Ansairiyeh Mountains and Mesopotamia in 1881 (one), by Rev. Canon Tristram.
Dante (one), by Rev. M. Creighton.
The Storage of Electricity—the Faure Secondary Battery (twice), by Mr. J. W. Swan.
Art in the House (one), by Mr. R. W. Edis.
The Bearing of Modern Microscopical Work upon some Forms of Disease, Life Histories and their Lessons (two), by the Rev. W. H. Dallinger.
The Tonic Sol-fa System (one), by Mr. J. S. Curwen.
Language and Literature (one), by Mr. R. Spence Watson.

1882—83.

Electricity and Magnetism (twelve), by Dr. C. M. Thompson.
An Introduction to the Study of Mental Philosophy (six), by Dr. Merz.
The Development of English Literature since 1789 (twelve), by Mr. Richard Hodgson.
The Opinions of Ancient Philosophers, Historians, and Poets respecting Comets (one), Mr. T. P. Barkas.
"A Trip to Rome" (one), by the Rev. T. Austin.
The Genius and Poetry of Wordsworth (one), by the Rev. H. Batchelor.
The Evolution of the Steam Engine (two), by Mr. J. A. Haswell.
Pianoforte Music: its Writers and Players (one), by Mr. Whatmoor.
Birth and Death of Worlds (one), by Mr. R. A. Proctor.
The Great Pyramid (one), by Mr. R. A. Proctor.
A Visit to Merv (one), by Mr. E. O'Donovan.
Modern Humourists (one), by Rev. E. Bradley (Cuthbert-Bede).
Wit and Humour (one), by Rev. E. Bradley (Cuthbert-Bede).
The Art Season (one), by Mr. Henry Blackburn.
The Art of Illustration (one), by Mr. Henry Blackburn.
Colour in relation to Art (one), by Mr. James Sully.
How the Eye interprets Pictures (one), by Mr. James Sully.
Hans Andersen (one), by Mr. Edmund Gosse.
English Poetry 100 years ago (one), by Mr. Edmund Gosse.
The Transit of Venus, 1882 (one), by Prof. R. S. Ball.
Comets (one), by Prof. R. S. Ball.
The Greatness of Northumbria in the Seventh and Eighth Centuries (one), by Prof. J. Earle.
The Danish Invasions and their Effects (one), by Prof. J. Earle.

1883—84.

The Connection between the Fine Arts (one), by Mr. Ford Madox Browne.
The Idea in Painting (one), by Mr. Ford Madox Browne.
The House Beautiful (one), by Mr. Oscar Wilde.
Personal Impressions of America (one), by Mr. Oscar Wilde.
Kairwan the Holy: a Journey to the African Mecca (one), by the Rev. Alexander A. Boddy.
Festus, the Epic Poem of the Nineteenth Century (one), by Mr. T. P. Barkas.
Modern Eloquence (one), by Mr. W. J. Morrison.
Vortex Atoms (one), by Prof. Sir W. Thomson.
Progress in Electric Lighting (one), by Mr. J. W. Swan.
Animal and Plant Life, with especial reference to Animal Physiology (twelve), by Mr. E. A. Parkyn.
Elizabethan Literature (twelve), by Mr. W. R. Sorley.
Education in Newcastle (two), by Dr. Spence Watson.
Life in the Greek Heroic Age (one), by Mr. Andrew Lang.
The Eclipse of 1882 (one), by Mr. J. Norman Lockyer.
The Teaching of Science in Elementary Schools (one), Mr. W. Lant-Carpenter.

1884—85.

Plant Life (twelve), by Mr. E. A. Parkyn.
England's Social and Industrial Progress from the Conquest to the Reformation (twelve), by Mr. G. H. Leonard.
Adventures among the Great Andes of the Equator (one), by Mr. Edward Whymper.
The High Alps of New Zealand (one), by the Rev. W. S. Green.
The Correlation of Physical Forces (one), by Dr. G. H. Philipson.
The Paston Letters (one), by Mr. F. W. Dendy.
Speech for the Dumb (one), by Mr. B. St. John Ackers.
Music in its Historical and Biographical Aspects, with Pianoforte Illustrations (one), by Mr. J. Westwood Tosh.
Germs and Disease (one), by Dr. Donald MacAlister.
Lord Collingwood (one), by Mr. Gainsford Bruce, Q.C.
Readings (two), by Mrs. Scott Siddons.
A new Putrefactive Organism, with some Deductions concerning the Group (one), by the Rev. Dr. Dallinger.

1885—86.

The French Revolution from 1789 to 1795 (twelve), by Mr. Arthur J. Grant.
"The Senses and Nervous System" (twelve), by Mr. E. A. Parkyn.
Faraday and his Discoveries (one Juvenile), by Principal Garnett.
The Breath of Life (two Juvenile), by Mr. J. S. Chippendale.
Water (three Juvenile), Dr. J. T. Dunn.
Readings (two), by Mrs. Scott Siddons.
Rome, Ancient and Modern (two), by Mr. S. Russell Forbes.
Man and the Glacial Period (one), by Mr. S. B. J. Skertchly.
Do Plants think? (one), by Mr. S. B. J. Skertchly.
A forgotten Bible, or Hesiod, the earliest Greek Moralist (one), by Mr. J. C. Tarver.
The Weather (one), by Professor A. Schuster.
The Origin and Progress of Gothic Architecture (two), by the Rev. J. R. Boyle.
Europe after the Ice Age (one), by Prof. James Geikie.
Architecture, the Mistress Art (one), by Prof. Baldwin Brown.
History and its kindred Studies, or the value of Historical Evidence (two), by Prof. E. A. Freeman.
Greater Greece and Greater Britain (one), by Prof. E. A. Freeman.
Reading (one), by Mr. Charles Merivale.
Wagner and Parsifal, with illustrations (one), by Rev. P. T. Forsyth.

Mr. John Morley and the Rev. Alfred Ainger were unable to fulfil their engagements.

1886—87.

Four Thinkers on Life: Goethe, Shakespeare, Rousseau, and Wordsworth (twelve), by Mr. R. G. Moulton and Mr. G. C. Moore-Smith.
The Making of the Roman Empire (twelve), by Mr. A. J. Grant.
Recent and Fossil Crustacea, or an Evening with Crabs and Lobsters (one), by Dr. Henry Woodward.
The Pearly Nautilus, the Cuttle Fish, and its Allies, Recent and Fossil (one), by Dr. Henry Woodward.
Dramatic Readings (two), by Mrs. Scott Siddons.
The Astronomical Theory of the Great Ice Age (two), by Sir R. S. Ball.
Pianoforte Recitals: Beethoven, Mendelssohn (two), by Dr. Rea, with introductory and analytical remarks by Mr. J. S. Shedlock.
Footprints on the Sands of Time (one), by Ald. T. P. Barkas.

The Comic Element in Shakespeare's Plays (one), by Rev. Frank Walters.
Recitals: Schumann, Chopin (two), by Dr. Rea.
Electricity and Telegraph (three Juvenile), by Dr. Dunn.
Electricity and Telegraph (three Juvenile), by Mr. Chippendale.
Bells (one), by Rev. W. R. Haweis.

1887—88.

The Forces of Nature, an exposition of the Conservation of Energy (twelve), by Mr. Arthur Berry.
Heat and Light (twelve), by Principal Garnett.
Ancient Tragedies for English Audiences (twelve), by Mr. R. G. Moulton.
Ancient Comedies for English Audiences (twelve), by Mr. R. G. Moulton.
The Sun, the Earth, and the Moon, Mercury, and Venus, their relation to each other (one Juvenile), by Ald. T. P. Barkas.
The Superior Planets (one), by Ald. T. P. Barkas.
Comets, Meteors, what and where are the Stars and Nebulæ (one), by Ald. T. P. Barkas.
Sound and Music (three Juvenile), by Mr. J. S. Chippendale.
Readings (two), by Mrs. Scott Siddons.
The Sea Serpent (one), by Mr. W. E. Hoyle.
How I crossed Africa from East to West (one), by Commander Cameron.
The Origin of the Domestic Cat (one), by Mr. J. E. Harting.
The Nature of Explosions in Gases (one), by Prof. H. B. Dixon.
Modern Composers of Classical Song (one), by Mr. Carl Armbruster.

1888—89.

The Principles of Chemistry (twelve), by Mr. C. W. Kimmins.
Elizabethan Literature (twelve), by Mr. R. G. Moulton.
Electricity and Magnetism (twelve), by Prof. Stroud.
Milton and his Times (twelve), by Mr. G. L. Dickinson.

1889—90.

Earth, Air, and Water, Studies in Physical Geography (twelve), by Mr. W. W. Watts.
Poetry and Teaching of Robert Browning (twelve), by Mr. Owen Seaman.
Earth History from the Rocks (twelve), by Mr. W. W. Watts.
Milton's Paradise Lost (twelve), by Mr. R. G. Moulton.

1890—91.

Plant Life, with special reference to Vegetal Biology (twelve), by Mr. M. C. Potter.

History of France and the Netherlands during the Age of the Reformation (twelve), by Mr. A. J. Grant.

The Classification of Plants (twelve), by Mr. M. C. Potter.

The Making of Modern Europe (twelve), by Mr. W. F. Moulton.

1891—92.

The Absolute Monarchy in France (twelve), by Mr. A. J. Grant.

Human Physiology (twelve), by Mr. E. A. Parkyn.

Literary Study of the Bible (twelve), by Mr. R. G. Moulton.

Human Physiology (twelve), by Mr. E. A. Parkyn.

French Revolution (twelve), by Mr. A. J. Grant.

1892—93.

The Sunflower (one), by Mr. Grant Allen.

Pompeii (one) by Mr. Whitworth Wallis.

"Tennyson, the Poet of the Age" (one), by the Rev. H. R. Haweis.

Electro Metallurgy (one), by Mr. J. W. Swan.

Napoleon and his Times (twelve), by Mr. J. H. Rose.

Animal Life (twelve), by Mr. C. Warburton.

The Victorian Half Century (twelve), by Mr. C. S. Terry.

Darwinism (twelve), by Mr. Hugh de Havilland.

1893—94.

Expansion of England in the Eighteenth Century (twelve), by Mr. C. S. Terry.

Elementary Political Economy, or the making and sharing of Wealth, by Mr. H. S. Mundahl.

1894—95.

Some Modern Electrical Developments (one), by Mr. James Swinburne.

Life in Northumberland during the Sixteenth Century (one), by Mr. W. W. Tomlinson.

Weighing the Earth (one), by Mr. C. V. Boyd.

Tolstoï (one), by Sergius Stepniak.

Social Evolution (one), by Mr. Benjamin Kidd.
Art Education (one), by Prof. Herkomer.
Comic Songs (one), by Mr. N. Kilburn.
Mental Philosophy (six), by Dr. Merz.
Climbing and Exploration in the Himalayas (one), by Mr. W. M. Conway.
Dante (one), by Mr. P. H. Wicksteed.
The Moon (one), by Mr. J. D. McClure.
English Madrigal Composers (one), by Dr. Huntley.
Shakespeare and Music (one), by Dr. J. F. Bridge.
English Composers of Glees and Madrigals (one), by Dr. Huntley.
The Realistic Movement and its Meaning (one), by Mr. W. H. Dircks.
Thomas Paine and the French and American Revolutions (one), by Mr. Moncure D. Conway.
The History of Gothic Architecture (twelve), by Mr. D. H. S. Cranage.
Modern Novelists (twelve), by Mr. E. J. Mathew.

1895—96.

English Essayists (twelve), by Mr. E. J. Mathew.
The Venetian Republics (twelve), by Mr. H. Boyd Carpenter.
Maria Theresa (one), by Mr. H. S. Mundahl.
Scenic Art (one), by Prof. Herkomer.
Quartz Fibres (one), by Prof. C. V. Boyd.
Buddhist Life and Art (one), by Prof. Rhys Davids.
The Democratic Painters (one), by Miss Rose Kingsley.
Light and Colour, or the Study of a Sunbeam (one), by Prof. J. A. Fleming.
Music in every-day Life (one), by Dr. Huntley.
The Influence of Dance Forms upon the works of Classical Composers (one), by Dr. Huntley.
Tales of the Scottish Peasantry (one), by Sir George Douglas.
The Atmosphere and its Relation to Health (one), by Prof. V. Lewes.
Wagner's Music-Drama: The Nibelung's Ring (one), by Mr. N. Kilburn.
The Migration of Birds (one), by Mr. Charles Dixon.
English Church Architecture (two), by Mr. G. H. Blunden.
Adam Smith (one), by Mr. John Rae.
Pepys' Diary and its Musical Notes (one), by Dr. Bridge.
The Troubadours (one), by Mr. Wicksteed.

APPENDIX C.

HONORARY OFFICIALS OF THE SOCIETY SINCE ITS COMMENCEMENT.

PRESIDENTS.

Year of Appointment.		Year of Death or Resignation.
1793.	John Widdrington	1797
1798.	Sir J. E. Swinburne, F.R.S. and S.S.A. Lond. and Perth	1838
1838.	C. W. Bigge	1850
1850.	T. E. Headlam, M.D.	1855
1855.	Robert Stephenson, M.P., F.R.S.	1860
1860.	Sir William George (now Lord) Armstrong, C.B.	——

VICE-PRESIDENTS.

1793.	Stephen Pemberton, M.D.	1797
——	Robert Hopper Williamson	1795
——	John Clark, M.D., F.R.C.M. Ed.	1795
——	William Cramlington	1795
1795.	Malin Sorsbie	1796
——	John Ramsay, M.D.	1796
——	Ralph Beilby	1796
1796.	Robert Doubleday	1823
——	Isaac Cookson	1832
——	John Clark, M.D., F.R.C.M. Ed.	1797
1797.	Thomas Bigge	1806
——	E. Kentish	1799
1799.	James Losh	1834
1806.	G. W. Bigge	1838
1823.	Rev. J. Collinson, A.M.	1837

Year of Appointment.	VICE-PRESIDENTS—*continued.*	Year of Death or Resignation.
1832.	Christopher Cookson	1833
1833.	John Clayton	1890
1834.	T. E. Headlam, M.D.	1850
1837.	Rev. W. Turner	1846
1838.	John Buddle	1840
1840.	Rev. Dr. Besly	1857
1846.	George Burnett, jun.	1848
1848.	The Rev. (afterwards Ven. Archdeacon) R. C. Coxe, A.M.	1855
1850.	Robert Stephenson, M.P.	1855
1855.	W. G. Armstrong, F.R.S. (now Lord Armstrong)	1860
——	John Fenwick, F.S.A.	1865
1857.	Hugh Lee Pattinson, F.R.S.	1859
1859.	Sir W. C. Trevelyan, Bart.	1866
1860.	Rev. John Collingwood Bruce, LL.D., F.S.A.	1893
1865.	E. Charlton, M.D.	1875
1866.	Rev. James Snape	1881
1875.	T. Humble, M.D.	1878
1878.	D. Embleton, M.D.	——
1881.	Joseph Wilson Swan, F.R.S.	——
1891.	Thomas Hodgkin, D.C.L., D.Litt.	——
1893.	Robert Spence Watson, LL.D.	——

SECRETARIES.

1793.	Rev. William Turner	1837
——	Robert Doubleday	1796
1796.	John Brumell	1804
1804.	John Airey	1806
1806.	John Murray	1809
1809.	Armorer Donkin	1812
1812.	Woods	1815
1815.	Edmondston	1821
1821.	Rev. Anthony Hedley, A.M.	1825
1825.	John Adamson, F.S.A., F.L.S.	1856
1837.	J. T. Brockett	1843
1843.	John Renwick	1852
1852.	Joseph Watson	1860

Year of Appointment.	SECRETARIES—*continued.*	Year of Death or Resignation.
1856.	William Kell, F.S.A.	1862
1860.	Thomas Humble, M.D.	1861
1861.	Robert Calvert Clapham	1882
1862.	Henry Tuke Mennell	1862
——	Robert Spence Watson	1893
1882.	H. Salvin Pattinson, Ph.D.	1884
1885.	Rev. T. Adams, M.A.	1886
1886.	Prof. J. Herman Merivale, M.A.	1895
1893.	Alfred Holmes	——
1895.	Frederick Emley	——

TREASURERS.

1793.	Thomas Gibson	1798
1798.	William Boyd	1825
1825.	James Smith	1833
1833.	John Spedding	1835
1835.	Robert Boyd	1844
1844.	John Anderson	1851
1851.	R. R. Dees	1864
1864.	Thomas Humble, M.D.	1875
1875.	Thomas Hodgkin, D.C.L., D.Litt.	1889
1889.	C. J. Spence	——

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